PHILADELPHIA, JUNE 13, 1885.

ORIGINAL COMMUNICATIONS.

CASE OF TYPHOID FEVER COMPLICATED BY TETANUS, WITH A BRIEF REVIEW OF OTHER RECORDED CASES OF THIS COMPLICATION.

BY HENRY M. FISHER, M.D.,

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S. C., æt. 34, colored, had for about a week before my first visit to him experienced irregular chills, slight epistaxis, and sore throat, and had been languid and restless at night. I was called to see him March 21, 1884. I found that he had high fever (temperature 105° F.) and that there was much tympanites, but was told that he was decidedly constipated. At the time of my visit his nose was bleeding freely. Ordered cinchoninæ sulphat. gr. x at 7 and 9 A.M., and acid. muriatic. dilut. gtt. v every three hours.

March 22.—Pulse 100; temperature 105°. Tympanites undiminished. Very free epistaxis.

March 23.—Pulse 92, and weak; temperature 102.2°; tongue moist; mild delirium. Says that he sees "horses, dogs, and elephants." Epistaxis continues, and he has had some vomiting; abdominal wall tender to the touch; splenic dulness obscured by extreme tympanites; no movement of the bowels. Ordered calomel, gr. vi, and for muriatic acid substituted acid. carbolic. liq., f℥i, tr. iodin., f℥ij,—to be given in drop doses every two hours.

March 24.—Pulse 96, and fuller; temperature 103°. Complains of much abdominal pain. The calomel did not operate, and his intestines are greatly distended with gas. Very free epistaxis last night. Ordered calomel, gr. vii, sodii bicarb., gr. x, and increased dose of iodine and carbolic acid to two drops.

March 25.—After an injection, yesterday evening patient's bowels were moved six times. He was less delirious during the night. Temperature 104.3°. Marked increase in hepatic and splenic dulness. Tongue still moist, but lips dry. Ordered cinchoninæ sulphat. gr. xv at 5 and 7 A.M.

March 26.—Pulse 92; temperature 102.4°. Marked double vision this morning, and had muttering delirium during the night. No further movement of the bowels. Abdominal pain still complained of. Calomel and soda repeated, and ordered quininæ sulphat. gr. viii at 4, 4.30, and 5 A.M.

March 27.—Pulse 88; temperature 102.8°. Expectorated some blood this morning, which appeared, however, to have come from posterior nares. Calomel again failed to operate. Appetite has improved.

March 28.—Was called to see patient at 6 A.M., and found that for about two hours he had been in convulsions. Pulse 84; temperature 99.2°; respirations about 10 in minute, and breathing of Cheyne-Stokes type,—one long, sighing respiration being followed by several shorter and shallower ones. There is complete unconsciousness, with marked clonic spasm of the muscles of the upper extremity and of the facial muscles, with only slight intervals of comparative muscular relaxation. There was very decided tonic rigidity of the masseter muscles (trismus). Applied cold to the head by means of Leiter's tubes, and directed the cap to be kept constantly applied. Four hours later his condition had changed very little, except that the paroxysms were even more violent. His eyes were wide open, and he had a startled, frightened look, but appeared to be almost if not quite unconscious. There was marked opisthotonus. His jaws could not be separated sufficiently to introduce food or medicine by the mouth, so I ordered him milk and beef-tea per anum, also chloral hydrat. gr. xx every three hours by enema. I also directed two ounces of blood to be removed by leeches applied to each mastoid process.

In the afternoon I found him somewhat quieter, and was told that he had slept a little. The tetanic contractions were still, however, very marked. Gave atropinæ sulph. gr. $\frac{1}{100}$ hypodermically.

March 29.—Slept a little last night, and this morning consciousness has returned and all the tetanic rigidity and spasmodic movement have passed away. Leiter's tubes were removed, having been used for twenty-four hours with hardly any interruption. His temperature was normal or subnormal, and after this there was no further febrile reaction. His strength returned slowly, and he was very nervous and irritable for several weeks. In six weeks or two months, however, he was able to return to work.

Among the nervous complications of typhoid fever tetanus would appear to be one of the rarest. Very frequently it is observed that tonic spasm or rigidity affects certain groups of muscles in the course of the disease; but general tetanic paroxysms are seldom observed, or at least have been seldom noted.

Duchek* reports a case of typhoid fever in which there was hyperæsthesia of the entire cutaneous surface, slight ptosis of the right eyelid and dilatation of the right pupil, fibrillar twitchings of the facial muscles, deviation of the tongue, and

* Wochenblatt der k. k. Gesellschaft der Aerzte, September 12, 1866.

tonic spasm of the cervical muscles, at first confined to the right side. Later, trismus and opisthotonus occurred. Death occurred on the fourteenth day of the disease.

Girerd's* case occurred during apparent convalescence from a severe attack of typhoid fever. On the *thirty-fifth day* from the onset of the disease severe epistaxis occurred. This was followed by paresis of the right side of the body and "paralysis of the pharynx." The patient presented tonic contractions of the facial, dorsal, and abdominal muscles. He was treated by galvanism to the spine and chloral by enemata, and appeared to be improving, when, through some mistake, a toxic dose of morphine was given him, and he fell into a comatose condition and died on the seventh day after the first occurrence of the tetanic symptoms.

Simoneau† records one fatal case; and Fussell‡ records one in a girl of 18 during convalescence in the third week, and another case, in which tetanic convulsions occurred,—also during the third week,—which ended in recovery. J. Fowler§ records a similar fatal case, which was ushered in by profuse epistaxis. Dieterlen‖ records the case of a child who presented, on the fourteenth day of an attack of typhoid fever, stiffness of the limbs and neck, and on the fifteenth tetanic rigidity of the whole body. On the twenty-first day general convulsions set in (epileptiform), attended with a fall in temperature. These convulsions recurred on several successive days, but the child ultimately recovered.

Riberolles¶ records a case of a patient who, on the twentieth day of an attack of typhoid fever, was seized with violent delirium, stiffness, and pain on pressure over the muscles of the back and neck, and who developed on the thirtieth day marked opisthotonus, attended with "choreic movements of the lips and hands." With the onset of the opisthotonus a sudden fall of temperature was noted (from 104.6° F. to 98.2° F.). The day following, there was marked spasm of the facial muscles; his pupils, which had been dilated, became contracted, and he died in a state of profound coma. The autopsy revealed ulcerations of Peyer's patches in process of cicatrization, engorgement of the cerebral sinuses and of the vessels of the dura mater, thickening of the arachnoid, three or four reddish patches (ecchymoses) on the surface of the brain, with effusion of fluid into the ventricles, thickening and opacity of the membranes of the cord, with reddish patches on its surface, as well as on that of the medulla oblongata. There were also signs of congestion of the substance of the spinal marrow and medulla oblongata.

It will be noticed that in the case just mentioned, as in my case, the tetanic spasm was ushered in by subsidence of the fever. Liebermeister has called attention to this great depression of the body-temperature which often attends the development of severe nervous complications in the course of typhoid fever, particularly when they occur at about the middle of the second or beginning of the third week. He attributes this phenomenon to an excessive irritation of the heat-controlling centres; but undue stimulation of the vaso-motor nerves, inducing contraction of peripheral blood-vessels, might also, I think, account for it. In the case of Riberolles there was inflammation of the spinal as well as of the cerebral meninges, and congestion of the substance of the cord and medulla oblongata. This is the only observation that I have been able to find of the condition of the cord and its membranes in a case of typhoid fever which was complicated by convulsions of tetanic type. It seems probable, however, that in all such cases which ended fatally we should find marked evidences of *spinal* meningitis, or at least of *congestion* of the *spinal* meninges. We may, of course, call *reflex irritation* to our aid to explain the development of the tetanic spasm in these cases. We have a central nervous system already in a state of abnormal irritability, and we have a localized lesion in the intestinal ulceration. If, however, this intestinal ulceration were really the exciting cause, we should, I think, expect to see the spasm developed at a much earlier period of the disease than is usually the case, and not at the stage when, in the great majority of cases, the intestinal ulcers are beginning to heal.

* Revue de Médecine et Pharmacie de l'Empire Ottoman. Constantinople, 1876–77, ii. 770–881.
† Journal de Médecine de l'Ouest, Nantes, 1882.
‡ Philadelphia Medical Times, xiii. p. 263, 1882–83.
§ Buffalo Med. and Surg. Journal, 1881, xx.
‖ Revue Médicale de l'Est, Nancy, April 1, 1884.
¶ Contributions à l'Étude des Phénomènes nerveux de la Fièvre typhöide, leurs Rapports avec la Température. Thèse de Paris, 1884.

Congestion of the cerebral meninges is known to be of common occurrence in the course of typhoid fever. Hoffmann found evidences of mild inflammatory action ("apparent increase in subarachnoidal exudation") in ninety-two out of one hundred and sixty-six cases; "moderate hyperæmia of the pia and arachnoid" in thirty-six; while signs of *intense hyperæmia* with purulent exudation (acute meningitis) were present in only four. And when we consider how much the heart is enfeebled by the long continuance of the fever, we need not be surprised at the frequency of passive congestion. In the general muscular degeneration the unstriped muscular fibres of the blood-vessels also share. The epistaxis which is so constant an accompaniment of the invasion-stage of typhoid fever must be looked upon as an indication of congestion, and when long continued and profuse it should arouse our fears of serious congestions of internal organs, and particularly of the brain.

That a congestion of the *spinal* meninges sufficiently severe to give rise to a high grade of sensory and motor disturbance—spasm, hyperæsthesia, etc.—should set in with great suddenness and disappear as rapidly as it occurred is a supposition to which the well-known severe pulmonary congestions of short duration afford some support, and the gratifying results of the treatment based on this view of the complication appear to give further confirmation to it.

It would be interesting to know whether the negro race, which seems so predisposed to tetanus from traumatic causes, is also peculiarly liable to this complication in typhoid fever. I have not, however, been able to find any previous record of its occurrence in the negro as a complication to this disease.

A CASE OF DERMOID OR PILIFEROUS TUMOR, WITH CURE BY SPONTANEOUS OPENING INTO THE INTESTINE.

BY WALTER F. ATLEE, M.D.

Read before the College of Physicians of Philadelphia, March 4, 1885.

M. C., residing in this city, came to me in May, 1884, on account of a lump she had that day discovered in the lower part of the belly. She was 32 years of age, of medium size, with the appearance of good health. Her menses always came regularly every four weeks, never were profuse, and, as a general rule, lasted but two days.

This lump appeared to be egg-shaped, the long diameter in the direction of the spinal column, in size perhaps six inches in its greatest length, and placed rather above the womb, and somewhat to the left of the median line. She complained of pain and of obstruction to the passage of the stool. For this condition the use of a pill composed of opium and of the compound extract of colocynth was advised. A few days afterwards, on account of complaint of difficulty in passing the urine, a drink of bitartrate of potassa was recommended for use. In July, on account of troubles of digestion, bismuth and strychnine were prescribed, to be used before meals, and pills of carbonate of iron to be taken after. Early in September pills of ergotin were ordered, and their use was continued again in October and in November and December. During this time the lump appeared to be growing rather smaller, and it was certainly becoming softer. On the 11th of November a considerable quantity of matter like thick gruel, white, and with no odor, came away from the bowel. This, under the microscope, was seen to be composed of the exfoliated epithelial cells and the secretion from sebaceous glands. This continued to come from time to time, and as it did, the lump became smaller. On the 10th of January hair began to come, some of it long and very black, and the most of it of a light brown, and but four or five inches in length.* On the 16th of January the matters that came away were very small in quantity, greenish in color, and of a very bad odor. Since that time there has been nothing of notice in the discharges from the bowels, except twice a slight quantity of blood. There is now no sign of the tumor.

These dermoid or piliferous tumors are interesting, surgically, from the obscurity they throw over diagnosis, and in the complications they occasion. In the case just related, the tumor was believed to be a uterine fibroid for several months,—in fact, until it was observed to become quite

*A considerable quantity of this hair was shown to the College.

soft, from hard, as it had always been before. In a pathological point of view their interest is very great indeed, and also in one of comparative physiology. By far the larger number of dermoid cysts —indeed, the immense majority of them —are ovarian; but no matter in what part of the body they may be found, or what may be the sex of the patient, the doctrine of "the continuous development of tissues out of one another," as Virchow calls it, will suffice to account for the growth of all ordinary dermoid or piliferous tumors. Inherent in the tissues of the body is a peculiar formative and reproductive power, and it operates in the production of these strange tumors, as it does in the large number of multiform morbid growths which spring up everywhere under circumstances impossible for us to explain.

In ovarian morbid growths the kind of tumor that is formed depends upon the strength of the formative impulse. In ordinary cases, the force of formative power goes no further than the production of cyst-walls with a secreting endothelium which pours out fluid contents. In some cases the cell-growth is enormous, and yet there is no disposition to organization, and piliferous excrescences, cancerous and colloid masses, show themselves. In others, again, imperfect attempts at organization are seen, as in those called dermoid or piliferous, on account of what is most usually found in them.

The origin of all these cysts is traced, indirectly by way of exclusion, and directly by way of observation, to the development of the ovisacs or Graaffian vesicles; and, when we consider what these ovisacs are, we need never be surprised at the contents of these cysts, and at the abundance, the nature, and the variety of these contents. When skin, hair, teeth, and so on, are met with, it is quite in accordance with known facts in comparative physiology to look upon tumors containing them as imperfect attempts at organization arising from the powerful germinative aptitude of the ovary. The formation of imperfect tissues is reached without ever going so far as the formation of an organ, let alone that of an organism. Such formations may be looked upon as examples of parthenogenesis, as imperfect vestiges in the higher animals of a regular physiological act in some of the lower ones.

THE PROBLEM OF ACCLIMATIZATION.*

BY ISAAC HULL PLATT, M.D.,
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THE question of acclimatization, though a long-vexed one, and one which has attracted much attention from the standpoint of the biologist, the anthropologist, and the physician, has never been satisfactorily answered. This is doubtless to a great extent due to the fact that it has never been approached in the light which the advances of recent years in the fields of biology and anthropology are capable of affording.

While some students of the subject have claimed that all animals and plants are capable of becoming gradually adapted to new climatic surroundings, and that the human race most readily and thoroughly submits to such modification, others have maintained that man is totally incapable of acclimatization, and have been most emphatic in their protest against the possibility of such process as applied to malarial and endemic fevers. Knox even went so far as to avow the opinion that the European races in America and elsewhere would become extinct if not continually replenished by immigration. Probably nobody at the present day would go to this extreme; but Parkes in his "Practical Hygiene," and many others, take the ground that as a general principle acclimatization of the human race is impossible.

Common experience certainly seems opposed to this view. Every one who has travelled must have observed that even in undergoing slight changes in atmospheric and telluric influences, slight disturbances are produced which rapidly pass off as one becomes accustomed to his new habitat; and all know as matter of history that great and powerful peoples have grown up in lands new to their races and which at first proved injurious to them.

The fact to which Dr. Westbrook called attention in his paper before this Association last year—namely, that immigrants and their children, especially the Irish, are peculiarly prone to pulmonary phthisis —is one which all physicians practising in the large cities must have observed; and yet in a few years their descendants show no special susceptibility to that disease.

* Abstract of a paper read before the American Climatological Society, New York, May 28, 1885.

Our entire fifty millions of population are the descendants of immigrants, and yet as a people we are no more subject to pulmonary diseases than the inhabitants of many European states.

The general subject of acclimatization is ably discussed by Mr. Alfred Russel Wallace, in the "Encyclopædia Britannica" (ninth ed.). The definition there given is "the gradual adaptation of plants to unaccustomed climatic influences, which are at first injurious to them."

The definition is important, because, when brought to this test, much of the argument on the negative side of the subject will be found to have no application. Mr. Wallace quotes from notes furnished him by Dr. Richard Spence, who resided many years in South America, to prove the perfect acclimatization of the Spanish race in Peru, in some portions of which there reside populations of strong, stalwart men and handsome women, remarkably exempt from disease, in a climate where the thermometer for months at a time rarely falls below eighty degrees, even at night. Dr. Spence's notes also show instances of different portions of the same race of Indians, one of which had become accustomed to the rare, cool atmosphere of the great altitudes of the Sierras, another to the tropic heat of the plains, yet either transported to an intermediate climate would sicken and die. The colonization of Algeria by the French is an interesting case in point. When, after the conquest, the first attempts at colonization were made, they were met by a most signal lack of success. The immigrants died in great numbers, and the births were comparatively few. The attempt at founding a colony was almost despaired of, but after a few generations the tide turned, the births exceeded the deaths, and recent censuses show a great increase of the native population of European descent.

If we admit the principle of evolution, that of adaptation to climate must follow as a corollary.

"The broadest and most complete definition of life," says Herbert Spencer, "will be the continuous adaptation of internal relations to external relations;" and he shows that any organism subjected to new conditions will, if the change be not so sudden and severe as to end its life, gradually undergo such modifications of function and structure as to fit it for its new environment. The elements which go to make up what we know as climate are so numerous and diverse that we may, as applied to the human race, practically regard the terms as coextensive, and acclimatization may be regarded as but a phase of adaptation to environment, which Spencer has shown to be the fundamental law of biology.

Admitting, then, that acclimatization does take place, it will present itself in two phases, as applied to the individual and to races. As students of climatology, and, as all physicians must be to some extent, as anthropologists, the ethnic aspect of the subject has its interest for us, but as practitioners the matter of individual acclimatization is of more vital importance.

When we come to consider the anatomical and physiological changes by which the adaptive changes are brought about, we are met by the difficulty that we are dealing with problems of which we are not in possession of sufficient data to solve, owing to our yet imperfect knowledge of the profounder questions of physiology; and all we can hope to do is to discover a harmony with general principles, and to suggest a few of the lines upon which the changes will be worked out. Suppose, for instance, a person goes from a cool or temperate climate to a warmer one: the organism is deranged, for the reason that the balance between the functions of the various organs is disturbed,—the skin, for instance, being called upon for increased work, the lungs and kidneys for less than usual; but upon the same principle that a muscle increases by use, or the eye or the hand becomes trained to new employments, those organs which are subjected to an increased demand for functional activity will undergo a process of growth and development to enable them to meet their new conditions. At the same time the organs from which less is demanded will be the subjects of corresponding involution, and the balance will gradually be restored.

When we consider the subject of the acclimatization of races, the principle of natural selection becomes an important factor, for it is obvious that if the race is placed under new and unfavorable conditions it will only be those individuals most fitted by accidental characteristics or by the process of individual adaptation who will survive and propagate the race in its

full vigor: their descendants inheriting the peculiarities of their ancestors and undergoing further adaptive modifications, the race will continue down the generations the harmonizing changes.

It has been argued against the principle of acclimatization that, in case any portion of a race of people is removed to a climate widely differing from their own, the principle of reproduction becomes so greatly diminished that the race must gradually die out. This, while partly true, will prove upon examination not to be an obstacle to acclimatization, but an important factor in bringing it about. To a certain extent the function of reproduction is the evidence of a surplus vitality over and above that required to maintain the life of the individual, and anything which diminishes the vitality of a race will first affect its reproductive power. Of course, if the deleterious change is sufficient to destroy this power, extinction of the race will ensue; but if the power be only limited, this very limitation, by permitting the race to be propagated only from its hardiest members or those best fitted to its new surroundings, will add a new force to those acting in the cause of adaptation.

We have seen that natural selection is an important factor in bringing about the acclimatization of a race; but may not the same principle apply to the case of an individual? In one sense an individual may be considered as a highly complex community, composed of innumerable protoplasmic elements, each of which lives its individual life, absorbs, excretes, performs its function in the animal economy, and dies. Now, if these biological elements differ from each other, in no matter how small a degree, some of them must be better fitted to a new environment than others, and consequently will propagate more freely, and the organs and the organism itself will become correspondingly modified.

It has not been my intention to do more than to suggest some of the problems connected with this subject, and the lines on which they should be worked out. To attempt more would lead us into an unexplored domain of physiology. A full understanding of the subject would demand the investigation of the action of the various elements of climate upon each of the many functions of the human body and their reactions upon each other, and upon the structure of the organs.

It is very evident, and becoming more so every day, that in the forces which go to make up climate we have at our disposal not one but a host of agents, valuable for good if rightly used, but, like all therapeutic agents, capable of harm if applied without understanding. The subject of climatology is thus seen to be of the highest importance, for it affects not only the health of the individual but the advancement and development of the human race.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

(Continued from page 648.)

THE SURGERY OF SCROFULOUS GLANDS.

MR. T. PRIDGIN TEALE (*London Medical Times*, January 10–17, 1885) insists on the absolute inutility of merely incising or otherwise opening an abscess dependent upon a degenerate gland unless that gland itself be removed. The visible abscess in some cases is merely a subcutaneous storage-reservoir of pus, while the suppurating gland may lie deep below, only connected with the abscess by a narrow sinus. Suppuration of this kind, though long existing, may be brought to an end in the course of a very few weeks if the source of it be recognized and vigorously attacked. The mark left by surgical interference is insignificant compared to the ugly scar which may result from a sinus allowed to heal at its own leisure after discharging it may be for months or years. In some cases septic poisoning, reducing the vitality of the patient, may be entirely removed by such an operation. Mr. Teale also advocates the removal of enlarged glands before suppuration has taken place, not merely to prevent septic infection, but in order to get a better scar than can be obtained where the skin has been damaged by inflammation and thinning. He sums up his conclusions as follows:

1. Whenever septic material is contained in the system we should not rest until it is expelled and its burrows laid open and disinfected.

2. In a large number of cases of scrofulous neck there is no evidence of constitutional taint or weakness. Health may be restored to perfect vigor in many cases

by the destruction of all degenerate or septic material. Further enlargement of glands rarely follows the removal of the condemned ones.

3. Surgical interference is not only justifiable, but is demanded, (*a*) whenever a sinus resulting from a degenerating lymphatic gland exists; (*b*) whenever fluid—*i.e.*, pus—can be detected in connection with an enlarged lymphatic gland; (*c*) whenever there are enlarged glands accessible to surgery in a patient in whom a caseous or a suppurating gland has been already discovered.

4. Glands not caseous or suppurating, but which are an eyesore, may or may not be removed. The cautery-puncture of Treves ("Scrofula and its Gland-Diseases," p. 193) may in some instances prove the best method of treatment.

In dealing with a sinus, the channel should be enlarged by the knife or by a Bigelow's dilator, and the whole of its granulating surface scraped off. When a sinus is shallow, and covered by thin blue skin, this imperfect covering should be rasped away by the scraper, and any cutaneous overhanging edges should be trimmed off by scissors.

In dealing with a sinus or abscess, the surgeon should not rest content until he has discovered and eradicated the gland, always remembering that, if it be not obvious, there is sure to be a small track leading through the deep fascia to the missing gland. This opening should be enlarged so as to admit the spoon of Lister's scraper.

When a gland has not suppurated and is movable, it can be removed by very little dissection, almost by enucleation. The resulting scar is insignificant.

When a gland has suppurated, and generally when it has become caseous, the capsule should be freely opened and the contents should be eviscerated by Lister's scraper. If the stump of gland adherent to the capsule is too tough for scraping, it may be dissected away by the scalpel, if the risk of injuring important structures be not too great.

Sometimes further exploration shows neighboring glands which can be removed through the same opening.

As to after-treatment, the cavity, having been well cleansed by carbolic-acid solution (1 in 40) or by carbolized glycerin (1 in 10), is charged with iodoform. An india-rubber drainage-tube, reaching to the farthermost recess, is fixed to one extremity of the wound, the edges of which are carefully and accurately brought together by fine catgut suture. The wound may then be covered with a pad of salicylic silk, or some other absorbent antiseptic substance. At the end of a week the india-rubber drainage-tube should be replaced by one of gilt wire, which should remain there until there is reason to suppose that all is healed except the track of the tube. This period will vary from three to eight or ten weeks. The effectiveness of the scraping is much aided by the form of the scraper. Mr. Teale prefers Lister's to Volkmann's, and pictures several sorts, as well as the Bigelow's dilators above mentioned.

HEMORRHAGIC ERYTHEMA IN A CASE OF BLENNORRHAGIC RHEUMATISM.

Feulard (*La France Médicale*, No. 31, 1885) gives the case of a man, 21 years of age, in apparent good general health, but who had suffered from malaise, and loss of appetite and sleep, for several weeks. This person was taken, on the afternoon of the 21st of January, with pains through the body, most severe in the calves, neck, and head, with sore throat and slight diarrhœa. That night he did not sleep, and the next day he entered the hospital covered with an eruption which on the trunk and limbs was composed of disseminated, small, round lesions, some bright red, erythematous, and disappearing under the pressure of the finger. Other lesions were dark red, hemorrhagic, and exactly resembling the lesions of purpura. At two or three points were true ecchymoses. These lesions were not raised above the surface: they were few in number on the face, but plentifully distributed over the abdomen. There was no tendency to greater numbers of lesions over the articulations, but they tended to a circinate grouping in places. The eyes were injected, the conjunctivæ ecchymotic, the buccal mucous membrane, the velum, and the pharynx were covered with analogous lesions. There was no bleeding from the gums, the temperature was 95.3°, and the urine contained a trace of albumen. The articulations were intact, except that the right knee contained a slight serous effusion. The heart and lungs were normal. There was a slight discharge from the

urethra, but the patient had taken no medicine for this.

The patient was under observation for several days, during the first of which no change took place except that the old skin-lesions began to fade, while new ones took their place. At the end of this time the patient complained of pain in the left hand, the metacarpo-phalangeal joints of which were tumefied and red. The next day the left testicle was swollen, red, and painful. Without the epididymis being affected, the entire gland was enlarged. The eruption faded by degrees. The evening temperature was slightly elevated. Within a few days the swelling had passed to the left testicle, while the right had gone down, but there was no epididymitis. The discharge from the urethra was mucous. At the end of ten days from the original attack the patient was well.

HEREDITARY DERMATITIS BULLOSA AND HEREDITARY ŒDEMA.

Under this designation Dr. A. Valentin, of Berne (*Berlin. Klin. Wochens.*, No. 10, 1885) describes a curious affection coming under his notice, in which five generations (and possibly even more) of one family were involved.

The first member of the family to come under his notice was a well-developed, hearty young man, 16 years of age, who had suffered from earliest childhood with this form of dermatitis. In winter he was free from all sign of disease, except possibly after running exercise. But in summer even a slight pressure, if continuous, sufficed to bring out a profuse eruption of blebs appearing in the most various localities. In school, sitting on the wooden bench brought them out upon the buttocks; in gathering berries, the loins became affected; the pressure of the garters caused a ring of blebs to form around the legs. Strokes and bumps, however, did not give rise to blebs. Digestive disturbances, pneumonia, and an attack of eczema did not seem to influence the eruption of blebs.

On examination, June 24, 1884, (the palms of) both hands were found covered with pea- to walnut-sized blebs. Still larger blebs were found on the sole and inner edge of the feet. A bleb on the ball of the left great toe poured out over six cubic centimetres of a limpid serum. Pressure on the larger blebs caused some pain. The bases of blebs emptied a few days previously were inflamed, red, and firm. On the legs, arms, and loins were marks of old blebs. The blebs were never followed by scars. The temperature was normal, the urine free from albumen.

The eruption present had lasted fourteen days; new lesions were coming out.

July 11. A few blebs between the fingers and on the feet. Elsewhere all dried up.

The skin was abnormally excitable, so that with a sharp hard stick letters could be written by the red lines which remained after pressure.

The other patients in this family gave the same history of an eruption in all respects similar, only that in some cases severe burning and itching accompanied the outbreak of the bullæ. The affection began in each instance in early childhood, and became somewhat less marked about puberty, but the tendency remained during the whole lifetime. Some cases remained well through the winter, and all were much worse in the summer. No treatment had been of any avail. The blebs came out with uncommon rapidity when the skin was covered with sweat or any other fluid, so that the patients did not dare to spit on their hands when at work; otherwise blebs would certainly appear upon the palms. Greasing the hands or rubbing them with dry earth appeared to be useful in some cases when work was to be done.

Puncture of the blebs led to inflammation and suppuration, as did scratching or striking the parts. There was at no time fever or loss of appetite, though sleep was at times hindered by itching. The patients were obliged to give up their occupation as farm-laborers, and were declared unfit for military duty. The unaffected members of the family were perfectly healthy, except that they all had a tendency to excessive sweating of the feet. The genealogy of the family, followed out through four generations by Dr. Valentin, showed eleven members affected by this peculiar eruption. Two of these were women.

In addition, Valentin has observed two of those curious cases described by Quinke as acute œdema, cases which had been under the care of Dinkelacker, pupil of Quinke, and had been published by him.*

* Inaug. Diss., Kiel, 1882.

Valentin's cases also resemble the neuroses of the skin recently described.*

IS HERPES ZOSTER CONTAGIOUS?

Dr. Mullen reports in the *New York Medical Record* (March 7, 1885) the case of a young lady who came home a distance of fifty miles on account of having herpes zoster. It occupied the space from the sternum to the centre of the back. Three weeks from the time she came home, her mother, an old lady, was attacked with the same disease, commencing on the side of the nose, passing over the side of the forehead, and terminating near the neck. Both cases were protracted and severe.

This is one of those absurd observations which sicken the heart of the scientific investigator of disease.

MEDICINAL ERUPTIONS.

Eruption due to Borated Cream of Tartar.—Under the name of "tartarus boraxatus," which is not found in English pharmacopœias, but which I take to be a borated cream of tartar, Alexander (*Vierteljahrsch. f. Derm. u. Syph.*, vol. xi. p. 110) designates a substance of which he gave about half a drachm every two hours during the day for some two weeks. At the end of that time the patient displayed an eruption extending over the entire body except the neck and face, and composed of discrete small papules accompanied by severe itching. This eruption spread for some days, taking on a deeper red tint and being supposed to be an acute universal eczema. Four days after the eruption first appeared, some of the fingers were so swollen that they could not be flexed, and shortly after the lesions on the forearms and calves became confluent in patches. This tendency to confluence increased until the eruption extended in sheets over the lower limbs, becoming hemorrhagic in places. The neck was involved by this time. At the end of a week after the appearance of the eruption the administration of the "tartarus boraxatus" was stopped, and the eruption began to disappear. The epidermis scaled off in fine scales over the body and in larger ones from the hands, while a yellow sticky fluid exuded from the eyelids. The skin of the feet came off nearly entire. At the end of a week later the patient was well.

Alexander gives the following points of difference to aid the diagnosis of the eruption described, and that of measles, which it most resembles:

ERUPTION OF MEASLES.	ERUPTION FROM BORATED CREAM OF TARTAR.
	In the early days of the eruption it resembled measles closely.
Usually occurs in children.	Occurred in a man of 48.
Contagious.	No source of contagion.
Prodromes.	No prodromal stage.
Involvement of respiratory mucous membrane.	Respiratory mucous membrane unaffected.
Fever.	No fever until towards the last.
Eruption occurs first upon face, and is most marked in that locality.	Eruption appeared first in body, neck last involved, face not at all, worst in legs.
Only slight hemorrhages, occasionally in worst cases.	Hemorrhagic in leg.
Subsequent desquamation slight.	Subsequent desquamation severe and extensive.
Little (or no?) itching.	Much itching.
Eyelids not usually affected.	Eyelids affected moist and weeping.
General condition much disturbed.	General condition slightly disturbed.
Temperature high.	Temperature only high towards end.
Runs a regular course.	Ran a very irregular course.

Eruption due to Mercury.—Alexander (*Vierteljahrschr. f. Derm. u. Syph.*, vol. xi. 1884, p. 103) gives the case of a girl of 21, who was suffering with some slight affection, probably eczema of the eyelids, for which she was ordered an ointment of hydrarg. precip. alb. 1 part to adeps 10 parts. This ointment in a bean-sized piece was rubbed into the lids. The skin began to burn at once, and in spite of washing off the ointment an eczema (?) was lighted up which spread until it covered the whole body. At its height the eruption is said to have resembled scarlatina.

TREATMENT OF SKIN-DISEASES.

Chrysarobin Pigment in Tinea Tonsurans.—Dr. W. T. Alexander, in an article on the treatment of an epidemic of ringworm in a public school (*Jour. Cut. and Ven. Dis.*, February, 1885), recommends a pigment of ten-per-cent. solution or suspension of chrysarobin in liquor guttaperchæ. The method of using it was as follows. The hair was closely cut or shaved on all the heads which presented scaly patches; the scalp was thoroughly cleansed, and epilation by forceps of the hairs on the spots, and for a short distance around them, was practised. This left a clear bald spot, the centre of which was thickened, infiltrated, and of a dark-gray color, contrasting sharply with the healthy skin around it. This discolored area was then covered with a layer of the pigment, applied with a stiff brush. Nothing further was done until the artificial cuticle

* Die Neuropathischen Dermatosen, von E. Schwemmer, Wien und Leipsic, 1883.

began to crack, or until the growing hairs pushed their way up through it. The application was then renewed, and this was done twice or thrice a week. No attempt to isolate the patients was made, and no other precautions were taken, except to make them wear caps, to insist on frequent inspections and thorough cleanliness, and to attend to their general health. Cod-liver oil or iron was administered to such as seemed to need them.

Alopecia.—Lailler recommends daily frictions with a flannel dipped in one of the following mixtures: alcohol (60 per cent.), ℥iii, ℥i; essence of turpentine, ℥v; ammonia, ℈iv; or, alcohol (90 per cent.), ℥iii, ℥i; quiniæ sulphat., gr. xv; ess. bergamot, ℥iiss; ess. wintergreen, ℥ss. It is also necessary, from time to time, to shave the scalp, and give, if need be, internal treatment to the patient.

Onychia.—Dulles (*Med. News*, 1885, p. 321) recommends washing the usually stinking finger or toe-end with a weak solution of permanganate of potassium, trimming the nail back to where it is attached to the matrix, dusting on a fine powder of iodoform, and covering the whole in with turns of a narrow strip (not more than a quarter of an inch wide) of rubber adhesive plaster, which requires neither heat nor moisture to fix it. Pain, odor, and evidences of high inflammation rapidly disappear. The details are important: thorough cleansing and removal of dead nail, the iodoform in *fine powder*, and the plaster smoothly applied, beginning on the proximal side of the nearest interphalangeal joint *obliquely to the long axis of the finger or toe*, and carrying it up towards the end and round until it begins to return: by continuing these turns the strip, with a little guidance, will gradually make first a latticed covering, and then cover up the interstices of this lattice so as to make a complete cap. If necessary, a few strips may be applied directly over the end of the finger or toe to fill in gaps. The dressing may be removed in two or three days and renewed.

A new method of making Ammoniated Mercury Ointment.—Mielck (*Monatschrift f. Dermatologie*, 1885, p. 22) suggests that in order to obtain white precipitate in a finer state of division than it is customarily found, the precipitate obtained by the addition of aqua ammoniæ to a solution of the bichloride of mercury should not be allowed to become perfectly dry. He advises that the washed precipitate be dried so far that the stiff paste shall contain about fifty-five per cent. of the precipitate to forty-five per cent. of water. This is then mixed with the most concentrated glycerin, so that the latter shall contain one-third of its weight of dry precipitate. This thirty-three-per-cent. paste mingles very easily with ointments of various kinds, and forms a more agreeable as well as a more active ointment.

Treatment of Psoriasis.—Bésnier suggests painting a fifteen-per-cent. solution of chrysarobin in chloroform on the patches, afterwards coating it over with liquor gutta-perchæ. If there is much scaliness, a ten-per-cent. solution of pyrogallic acid in ether may be used instead, this also to be covered with a layer of gutta-percha.

Treatment of Eczema.—Dr. Max Burchardt remarks on the frequent coincidence of eczema of the face and scalp with inflammatory eye-troubles. A more or less considerable group of papules and vesicles can be seen on the outer surface of the eyelid and in its neighborhood. One or both sides may be attacked, and in the latter case one is usually worse than the other. When one side only is affected, a conjunctivitis or keratitis phlyctænoïdes is observed in the corresponding eye, while the other is unaffected. When eczema occurs on both sides, both eyes are affected to a degree accordant with the comparative severity of the corresponding eczema. When the latter occurs at a distance from the eye, the corresponding disturbance is less marked. Burchardt regards the eye-trouble in these cases as an extension of the eczema, the more so as the latter can often be traced to the edge of the lid. He thinks also that, if the eczema be not taken in hand, severer eye-troubles and even blindness may follow.

Burchardt's treatment of this form of eczema is as follows. Having cleaned off all crusts and scales, and having cut the hair short where this exists, he hastily paints over the eczematous patches with a three-per-cent. nitrate of silver solution. If one pencilling is not sufficient, the remaining crusts and scales are removed, and another coat laid on, and so on, several times within a few minutes. The eczematous patches are mapped out by the stain left after pencilling.

This procedure is at the outset undertaken daily, later every second day. The operation is at first painful, so that children cry, and the suffusion of the face thus brought on causes capillary oozing from the diseased patches. This, however, soon ceases, and each day the patches grow smaller without the employment of internal treatment. The cure is hastened if after each pencilling the following ointment is thickly spread over the affected parts:

℞ Ol. cadini, gr. xl;
Pulv. zinci oxidi, ʒi;
Vaselini, ʒv. M.

This salve is particularly useful when the eczema occurs about the temporal region; but it should not be applied upon the eyelids, as it is apt to get into the eyes and prove irritating. Burchardt says that ung. precip. album may be used on the eyelids; but this will probably do more harm than good.

TRANSLATIONS.

Pathogenesis of Rachitis.—Dr. M. Kassowitz is publishing a valuable systematic paper on "Normal Ossification, and the Diseases of the Bony System in Rachitis and Hereditary Syphilis," of which the second division of the second part, on the "Pathogenesis of Rachitis," appears in the last issue of the *Medizinische Jahrbucher* (1884, Heft IV.). The results of clinical observation and experiment upon animals are quoted in support of the view of the local origin of the disease. With regard to the view that the deficient resorption of the lime salts is due simply to the fact that it is hindered by diseases of the digestive apparatus, dyspepsia, and catarrh of the stomach or intestinal tract, he calls attention to the following facts:

1. That rachitis extremely frequently is developed *intra uterum*, where neither digestive disorders nor insufficient resorption of the lime salts brought to the fœtus in the maternal fluids, can be assigned.

2. That rachitis, as is shown by experience and the testimony of numerous observers, very commonly shows itself in children possessed of normal digestion and who enjoy a good bodily condition of nutrition.

3. That in the summer months, just when disorders of the digestive apparatus prevail in children, the number and intensity of cases of rachitis diminish gradually and in a most striking manner.

4. That, finally, other conditions, which are in no wise connected with the digestion and resorption of lime salts, such as bad hygiene of dwellings, syphilis, etc., favor the development of rachitis in a most remarkable degree.

After considering other theories of pathogenesis, the article concludes with the following propositions:

1. That the deficiency of lime of rachitic bones is called forth, singly and alone, by the local inflammatory process.

2. But the local process in the bones in turn has its origin in some preceding anomalous conditions of the entire organism.

Death caused by a Purgative in a Case of Intestinal Occlusion.—An interesting case of death following the administration of a dose of castor oil has been reported by M. Nicaise to the Clinical Society of Paris. The patient, a man 45 years of age, had a narrowing of the small intestine following a strangulated inguinal hernia, which was operated on in 1875. There were recent digestive troubles, vomiting, and intestinal colic, but the stools were regular and appetite good. Following a dose of one ounce of oil were symptoms of obstruction of the bowel, with rapid collapse and signs of failure of vital powers. Acting upon the idea of the existence of a stricture of the small intestine following the hernia, laparotomy was performed, but no constricting band was found. Enterotomy was then performed, and the contents of the distended intestine allowed to escape. The patient died four days later. There was no peritonitis and no effusion. A pouch-like dilatation of the small intestine was found just above the constricted portion, the communication between the two portions being not at the bottom, but to one side, in such a way that the increased muscular contractions, and excessive secretion under the influence of the purgative, had compressed the opening into the constricted portion and produced complete occlusion.

This case demonstrates the danger of purgatives in intestinal obstruction, and the necessity of prompt resort to operative measures for relief. The utility of washing out the stomach in such a case appears very evident.—*La France Méd.*, No. 44.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 13, 1885.

EDITORIAL.

ÆSTHETICS IN A NEW RELATION.

FOR nearly a half-century *an*æsthetics have been a perennial topic of discussion in medical journals. It is, therefore, with something of a sense of relief that we observe a disposition to discuss the positive aspect of the question, especially since the daily papers have devoted so much valuable consideration to æsthetics, under the leadership of Oscar Wilde and "Patience." The idea may be thought absurd that pills and bacilli have anything in common with paintings and basilica, but is not medicine an Art as well as a Science? Moreover, did not Apollo, the father of (patent) medicine, cure diseases and charm even the rocks with his lyre? Although Apollo is no more, his Art survives and the tuneful lyre remains.

We are led to these reflections by a learned and elegant editorial upon that important topic, "The Nursing-Bottle and the Æsthetic Faculty," in the pages of an esteemed contemporary, in which Plato and Erasmus Darwin are quoted to prove—1, that the fountain of the æsthetic faculty is woman's mammary gland (*i.e.*, from αἰσθάνομαι); 2, that the use of the nursing-bottle is the cause of the decline in the appreciation of beauty; and, 3, that infants brought up by hand must be destitute of the æsthetic faculty: the conclusion being that "those who love the beautiful, and mourn its decline, must seek the remedy for the latter by encouraging maternal lactation and banishing the nursing-bottle, when there will be hope that the coming race will attain the poetic ideal in this regard."

We fear that any existing deficiency of æsthetic culture is not attributable directly to the presence of the nursing-bottle, nor can it be implanted by so easy an expedient as "suckling fools." Before societies are formed, as has been ironically suggested, for the culture of the mammary gland, we dare cherish the hope that less restricted views of æsthetics may find acceptance. Plato never separated the beautiful from the good. Baumgarten, who originated the term æsthetic, defined beauty as the result of the highest and purest æsthetic perception, to the realization of which the finer portion of our nature aspires, and to trace which through the whole sphere of art is the work of æsthetic philosophy. Victor Cousin, a modern exponent of Plato's views, has also an exalted idea of the fountain of the æsthetic faculty. In his treatise *Du Vrai, du Beau et du Bien* he endeavors to rise to the conception of the source of beauty, which he finds in God, "in whom is combined absolute unity with infinite variety."

Deprecating anything tending to uphold gross sensualism in philosophy, art, or medicine, we agree, with Plato, that in τὸ καλόν we must always recognize the good as well as the beautiful.

TRANSACTIONS OF SOCIETIES.

THE objects sought to be obtained by the institution of medical societies are the organization of the profession and the advancement of science. In most of the States of this country local societies are purely voluntary organizations, without political affiliations or duties; in some they have been publicly recognized by the community as representing the profession, and have had conferred upon them special responsibilities in connection with State Boards of Health and the regulation of medical practice. The national societies of distinctly medical character, however, are purely voluntary associations: although to a certain extent representative, they are representative of ideas rather than of men.

The scientific value of medical societies consists partly in stimulating and encouraging individual research, but principally, we believe, in lifting the mass of the profession out of routine and informing its members of the steady progress of medical art. If medical societies fulfil their mission, it is evident that their proceedings should very closely reflect advanced thought in the various departments of medicine, and therefore reports of their meetings should afford the most valuable synopsis attainable of current opinion upon questions engaging the mind of the profession. As medical journals seek to occupy the same field, it is evident that transactions of truly representative societies will always eagerly be sought for and given a prominent place in their pages. Unfortunately for the journals, the impulse to hold annual meetings appears to be almost universal at this time of the year, and editors just at present find themselves struggling under an embarrassment of riches. Should our readers feel surfeited by so many reports appearing simultaneously, they have at least the consolation of knowing that the meetings will not occur again for a whole year.

AN INVITATION TO THE CHOLERA.

ALTHOUGH the appropriation for the connecting-sewer has been vetoed, and the good people of Philadelphia—at least that portion of them drinking Schuylkill water—are condemned to depend upon a contaminated water-supply, we hold that this is no reason for abandoning ordinary precautions against pollution within our city limits. Attention has been repeatedly called to the steamboats and boat-houses, with their water-closets discharging almost into the fore-bay, and we hope that the authorities will take efficient steps to remove this menace to the health of our city by compelling the use of earth-closets and other means.

We desire especially to call the attention of our health-officers to the danger threatening from the proposed national encampment of soldiers in Fairmount Park in the middle of summer. If the drainage of the Centennial grounds was sufficient cause for alarm, surely the presence of from ten to thirty thousand people daily within a limited portion of the Park, the drainage of which goes into the fore-bay, should cause some concern. Must the lesson of the Plymouth epidemic go unheeded? If cholera should appear this summer, will it not find the conditions most favorable for its development in a community whose drinking-water is seriously contaminated with sewage?

THE STATE BOARD OF HEALTH.

THE Committee of the State Medical Society and the profession at large are to be congratulated upon the passage of the bill to establish a State Board of Health for the better protection of life and health and to prevent the spread of contagious and infectious diseases in this commonwealth. We have already published (page 557) the text of the bill, and hope for the best results from its operation. If the Board shall accomplish what is reasonably expected from it, the Plymouth epidemic will not have raged in vain. Sanitary science apparently cannot advance in communities ignorant of its importance, except with the aid of object-lessons on a grand scale, which may be properly used to "point a moral," even if they do not "adorn a tale."

Pennsylvania having now distinctly ranged among the progressive States, the next step will be to establish a Medical Examining and Licensing Board, which will be brought before the next Legislature by a Committee of the State Medical Society. County societies which have not yet taken action upon the subject should communicate with the Committee.

LEADING ARTICLES.

NERVOUS SYMPTOMS OF ENTERIC FEVER.

II.—PATHOLOGY.

THE chief factor in the production of the nervous troubles is without question the alterations of the blood. Next comes pyrexia, then active or passive cerebral anæmia or hyperæmia, and finally inanition.

1. *Changes in the Blood.*—The blood invariably undergoes alterations of the most serious nature: primarily, in consequence of contamination by the infecting principle; secondarily, in consequence of contamination by means of the products of denutrition. It becomes deficient in globules and in oxygen.

Bouillaud, who bled his patients, observed that in the earliest period of the sickness the blood had lost its consistence. It presented some trace of the buffy coat, but never the firmness of the inflammatory diseases. In the later stages the clot was invariably less in amount than ordinary, and its softness, which varied greatly in degree, was often such that it amounted to a mere dark diffluent pulp, as if the plastic and coagulated part were broken down and in some way retained in the serum. This condition of the blood was regarded as among the most constant phenomena of typhoid fever, and was invoked to explain the congestions so frequent in this disease.

Becquerel and Rodier observed that the red globules were less abundant in advanced stages of the disease. Malassez found upon defervescence the number of the red globules to undergo a prodigious increase. They are then soft, readily undergo change in form, and tend to become crenated as in the infectious diseases.

Virchow was among the first to point out the fact that the white corpuscles are increased. The researches of Bonne and Grouardel proved that the number of white corpuscles rapidly increased during the early days of the attack until the eighth or ninth, when they again diminished, the proportion becoming normal and undergoing from that time oscillations corresponding to certain complications, but without definite relation to the rise in temperature until convalescence, when they again increased.

In rare instances Cornil observed in the blood in enteric fever patients large polygonal cells, enclosing red corpuscles more or less changed and resembling the large cells of marrow and of the spleen.

Since 1865, Tigri, and after him Hallier, Coze, and Felz, have found in the blood free granules in abundance, which they have regarded as bacteria. Other corpuscular bodies of various forms, micrococci, some of them indeed difficult to distinguish with certainty from other granules not organic in nature, finally, bacilli, have also been observed; but, as yet, neither the specific character of these organisms nor their pathogenic *rôle* has been determined.

The chemical analysis of the blood has, however, yielded more satisfactory insight into the pathological physiology of this fever. The disassimilation first affects the albuminoid principles of the blood. According to Becquerel and Rodier, the albumen is invariably diminished. Denis estimated this diminution at a fifth. The fibrin is also diminished, its loss being proportionate to the gravity of the attack.

Although the loss in corpuscular elements increases with the progress of the case, their absolute destruction is less than in many other acute maladies. Quinquand, who has studied the variations of hæmoglobin, also found that in enteric fever the diminution of this principle is less than in many other febrile affections, but that the power of the blood to absorb oxygen is markedly reduced; one thousand grammes absorbing only one hundred and ninety-five cubic centimetres as against two hundred and forty in health. There is a corresponding diminution in the exhalation of carbon dioxide, the expired air containing about one-fifth less than in the physiological state.

The blood further contains many waste products, the results of imperfect organic combustion. Substances incompletely oxidized accumulate. These undergo elimination by the urine, in which they sometimes amount to as much as ten grammes per thousand. In certain cases, a decided diminution in the solids of the urine has been observed coincidently with the development of grave cerebral accidents.

2. *The Pyrexia.*—Physicians have observed from the earliest time the close correspondence between the rise in temperature and nervous accidents. The evolution of these two groups of symptoms is in most cases parallel and simultaneous.

Stupor, for example, and other signs of a functional perversion of the nervous centres, increase or diminish as the fever becomes intense or moderates. The theory, seductive by reason of its simplicity, and defended by many physicians, that the nervous accidents are almost wholly dependent upon the febrile movement, has its origin in this parallelism. In the antipyretic treatment in all its forms the reduction of temperature is followed by a temporary amelioration of the nervous symptoms. Sometimes they disappear as by enchantment. Riberolles insists upon it that the influence of the cold bath upon the temperature is not greater than its direct influence upon the nervous centres. The bath lowers the temperature, it is true, but even without the lowering of the temperature it ameliorates the nervous symptoms. Ferreol treated a patient suffering from violent delirium, with a temperature of 38° C., with cold baths. The delirium ceased, but at the same time the thermometer rose to 39.5° and 40° C. If the cold bath (which sometimes fails to reduce the temperature) almost always exerts a favorable influence upon the nervous system, we must regard it as being no less a direct sedative or stimulant to the nervous system than a depresser of temperature.

Riberolles regards cold affusion as useful not so much in reducing temperature as in stimulating the nervous system, and calls attention to the nervous phenomena observed in the period of invasion of enteric fever,—namely, prostration of power, headache, vertigo, etc., which precede the febrile movement,—as evidences that the more marked nervous phenomena of the later stages may be also due to other causes than the elevation of temperature. In fact, the same condition controls both. The infecting principle which provokes the febrile action modifies at the same time the activity of the central nervous system. The two effects are correlative and simultaneous, and these two groups of symptoms resulting from a common pathogenic process augment and diminish together.

3. *Hyperæmia and Anæmia.*—Visceral congestions are the rule in enteric fever, and the nervous system is by no means an exception to this rule. While marked congestion of the gray substance is rare, it is certain that many of the advanced lesions occasionally found in the brain have their origin in hyperæmia, and that the serous effusion sometimes met with in the ventricles is the result of venous stasis. Notwithstanding these facts, Riberolles is of the opinion that this congestion is by no means in all cases sufficiently intense or extended to account for the grave functional disturbances observed. It is rather the quality of the blood supplied to the nervous system than its quantity which is at fault. Nevertheless, symptoms occasionally occur which point to transient hyperæmia of the meninges, if not indeed to actual inflammation. Such symptoms are strabismus, oculo-pupillary phenomena, convulsions, trismus, contractures, etc. When they occur in the beginning of the attack, it is probable they are due to a transient hyperæmia of which traces only are ever found post mortem. Serious nervous symptoms are, however, much more apt to occur at the height of the fever. Liebermeister found cerebral œdema in a case in which there had been trismus, and in two others attended by convulsions. In many instances it is impossible when nervous symptoms of this kind first appear to determine whether they are due to functional disturbances of a high grade or to inflammatory lesions. Such symptoms often have their origin in some lesion of the neighboring parts, such as intense otitis, caries of the petrous portion, necrosis; sometimes they are pyæmic.

Liebermeister has described under the name *cerebral excitement with decline of temperature*, certain nervous disorders developing at the height of the fever and in the middle of the second week. The patient is seized suddenly with symptoms of meningitis, grave intellectual disturbance, and insensibility to light. The temperature falls to 37° C. or 38° C., and remains about this level during the continuance of the nervous phenomena. In non-fatal cases, the nervous symptoms disappear after a time, and the temperature rises to the level corresponding to the period of the sickness. This observer regards the cause of these disorders as an irritation of the heat-centre.

To sum up, the nervous complications arising at the beginning of the attack must be ascribed to fluxions not associated with definite local lesions. Those which arise later in the course of the disease must be ascribed either to irritation of the encephalon or its meninges, or to true inflammatory processes.

Merklein in 1882 published the following case. A young man, 21 years of age, was seized in the course of the fever with intense agitation, and shortly expired comatose. At the necropsy there was found copious subarachnoid effusion with distention of the ventricles. The arteries were sound. In this case it would appear that the hemorrhage was due to intense congestion. Weiss found at the post-mortem examination of an individual dead of enteric fever an abscess of the brain, which had developed in the course of the fever, and had produced an incomplete hemiplegia and Jacksonian epilepsy.

The cord may likewise be the seat of hyperæmia, which then occasions special symptoms. In some cases the beginning of the sickness is marked by unusual pain along the spine, especially in the lumbar region, and extending into the inferior extremities. This symptom, fully described by Fritz in 1864, seems to be due to hyperæmia or irritation of the meninges of the cord, and may be compared to the pains which mark the onset of variola. Opisthotonus, if transient, probably has its origin in congestion of the cord. Persistent symptoms, referrible to the cord, occurring late in the course of the disease, are due to various lesions, such as foci of white softening, cervical meningo-myelitis, *sclérose en plaques*, etc. Contractures and convulsions, when not due to uræmia, must be ascribed to central lesions. In certain cases terminating in recovery or where the autopsy yields negative results, the course of disturbances of motion and of sensation yields indications so indefinite that their cause must remain at best a matter of conjecture.

Anæmia of the nervous centres is an important factor in the production of cerebral disorders. This is especially the case in those who were previously anæmic, or who during the course of the attack have suffered from abundant or repeated hemorrhages.

Inanition is the cause of the functional disorders of the nervous system which occur during the defervescence and in a period of convalescence, and which are often intense. This group of nervous disorders is by no means peculiar to this disease, and is to be distinguished from lingering disorders due to permanent lesions.

The following conclusions are warranted by the above review of the subject:

1. The so-called typhoid condition (stupor, somnolence, hebetude, prostration) is dependent upon the alteration of the blood caused by the infecting principle. It may be said that the intensity of these symptoms is proportionate to the virulence of the infection.

2. Delirium (especially when violent) and agitation, in a word the ataxic phenomena, are produced by the same pathogenic principle. But their manner of development and their course are to a great degree influenced by the pyrexia. The fact, however, must not be overlooked that certain forms of delirium occurring in enteric fever are not dependent upon the elevation of the temperature.

3. Certain forms of delirium, especially delirium ceasing after free epistaxis, and certain muscular disorders, such as convulsions and contractures, must be ascribed to hyperæmia. Disturbances of sensation are likewise in many instances the result of congestion of the nervous centres.

4. Vertigo, delirium, etc., may also be due to anæmia, which plays an important part in the production of enfeeblement of the central nervous system. Collapse is very often due to abundant hemorrhages. Inanition, producing, as it does, a profound denutrition, is a cause of anæmia and favors the collapse and marasmus which are so often fatal.

In conclusion, whilst intense pyrexia is the cause of serious symptoms and grave complications, it is possible to assign to it too high a position as a pathogenic factor. The dictum of Griesinger, "The fever in great part controls the situation"—*Das Fieber beherrscht zu grossem Theil die Situation*—has exposed those who have accepted it to grave therapeutic errors. The nervous phenomena of enteric fever are produced by various causes which act sometimes together, sometimes separately. It is not easy to discover the predominant element in a pathogeny always complex, nor is it desirable to carry the analysis to an extreme. From a clinical stand-point, however, the subject is important, for the management of the nervous symptoms will be successful in proportion as their interpretation is exact. J. C. WILSON.

COCAINE FOR SORE NIPPLES.—The latest application of cocaine is for tender and excoriated nipples. A five-per-cent. solution brushed over the nipple makes nursing possible and painless.—Dr. Andhoni, *Thérapeutique Contemporaine.*

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

A VISIT to the Observatory of Montsouris.—Dr. Landouzy, who is a professor (*agrégé*) of the Paris faculty, and one of the most eloquent teachers of the school, has been appointed to deliver the course of lectures on hygiene in place of Prof. Bouchardat, who is now on the retired list. He opened his course in a novel and very effective way by presenting to his class immense graphic curves of the rise and fall of typhoid fever and cholera in Paris for different years. He followed this objective style of teaching by showing large maps of Paris, tinted in black in the quarters of the city that were always affected by these zymotic diseases, owing, as he proved, to the defective sanitary state of those sections. He then continued this demonstrative mode of teaching by inviting the class to accompany him on visits to various hygienic points of instruction about the city, where he said that he would explain what could be done in a sanitary way to prevent disease. Among these visits will be one to the large sewers, and to the abattoirs, to show the means used to prevent the sale of bad meat by pouring petroleum over it. Another visit will be to the various crêches,—places that are organized with a corps of wet-nurses who are charged with the care of working-women's babies while they go out for the day. This series of shops are in the poor quarters, where there formerly was such frightful mortality among the babies owing to the poor women being compelled to leave their children in the care of almost any one who kindly undertook to help kill them with a bottle of sour cow's milk. In these places a small sum per day is paid by the mother, and the child is cared for by one of the appointed nurses, under the direction of a lady superintendent, and delivered over to the mother when she comes for it at night.

The first visit was to *L'Observatoire de Montsouris*. This municipal observatory and laboratory is in a large building crowning one of the highest hills on which Paris is built. Its object is not merely meteorological, but it contains rooms for the study of organic substances in the air and water, the investigation of which was the principal object of the visit. We were met by Dr. Miquel, the chief of the micrographic service, and author of "Les Organismes vivants de l'Atmosphère." This study of the living organisms found in the air, and of the means used to collect and count them, with the applications of such study to hygiene, is of great importance. We will not dwell on the various instruments, hygrometrical observations, and chemical apparatus, but will come at once to the very remarkable operations of Dr. Miquel, which he very kindly explained in full, showing us his inventions for catching and counting the living aërial microbes. With his process it is as easy to determine the number of germs in the air as it is to perform any simple chemical experiment. The Germans at Berlin also now do this work, but it has been going on here quietly in the doctor's laboratory since 1875, and his work has contributed in very large part to solving the obscure problem of the nature of the various microscopic impurities of the atmosphere.

The system consists in sowing the dust contained in a certain quantity of air in a prepared liquid called a "bouillon sterilisée," which is a nutritive jelly prepared from meat (at 110° C.). Another of these jellies is prepared by boiling the *Fucus crispus* in beef-soup.

It is all the more easy to catch and culture the air-germs, as Dr. Miquel has invented an aëroscope that will register them. It consists of a cylinder, moved by a small American clock-work, on which is fixed a band of nutri tive paper. This is covered over with a glass globe, which has a slit in it to allow the germs to be drawn in, and it has a tube at the top to draw the air through at a certain rate. They may also be taken even more simply by passing air at a measured rate through small glass globes, which contain the nutritive fluid, and examination of it after a certain time by the microscope. It would take up too much space to describe in detail the mode of operation. Let us pass on to the practical results,—first, as regards the bacteria found in the air of Paris.

There has been noticed in these organisms an annual rise and fall, as well as a daily one. The annual mean is 445 bacteria per cubic metre. In winter it was 260; spring, 495; summer, 650; autumn, 380. These observations were taken at the Observatory at Montsouris, a very healthy spot, but the number found at another of the stations—in the Rue de Rivoli, which is in the centre of the old part of Paris—was very different. Here the mean annual was 6295 in 1881, and it declined to 3480 in 1884, owing to the strenuous efforts made by the city government in cleaning the streets and flushing the gutters daily. Zymotic diseases declined during the same period from 14,080 to 11,500, but phthisis has not followed the descending scale: it continues to destroy per year in Paris over ten thousand people. But to return to the bacteria in the air.

Other experiments were made at Berne, Switzerland, which showed that the air of this city was four times as pure as that of Paris, but not so pure as that of the Observatory. The annual mean was 580 bacteria per cubic metre of air. Other trials were made in different quarters of Paris. Rue Monge, for instance, gave as high as 36,000. Prof. Ver-

neuil's wards at Hôpital de la Pitié gave 73,540. To test the purity of mountain-air, a series of experiments were made on the Swiss mountains last year by M. de Freudenreich, of Berne. Then during various trips made by a sea-captain, who takes great interest in these experiments, quite a large number of observations were made, both in port and from ten to five hundred miles out at sea. Commandant Moreau found a great difference, which we will give in a table. He also noticed that certain winds are found to bring a larger number of the bacteria to Paris. The purest air was found to come from the west and south, and epidemics were noticed to arise after a continued series of north winds. The daily rise and fall is interesting to note. The highest number is found at 6 A.M. and 6 P.M.; from noon to 2 P.M., the lowest; the night minimum is at midnight to 1 A.M. In brief, the following table will give the results:

Atmosphere.	Bacteria per Métre Cube.
Atlantic Ocean, on deck	0.6
Port of Marseilles	600
Saloon of ship at sea	60
Summit of Pantheon Church	200
Park of Montsouris, Paris	480
City of Berne, Switzerland	580
Rue de Rivoli, Paris (mean of 4 years)	3,480
New house in Paris	4,500
Old house in Paris	36,000
Hotel-Dieu Hospital	40,000
Hôpital de la Pitié	70,000

It will not be necessary to write much to prove what deductions can be drawn from a study like this for the benefit of all mankind. The proved purity of mountain-air and sea-air has led to sanitary results that seem, at first sight, an impossibility; but it is an actual fact that a company has been formed to erect steam-engines, with pumping apparatus, in the heart of virgin forests (pine) on the mountain, and also on sea-coasts, so that before long pure air can be laid on to houses in Paris, and we will only have to "turn it on" to have a current of pure air in our rooms, unhealthy factories, and hospitals. Space fails us to tell of none the less interesting experiments made at the Observatory on the germs in water, etc.

In conclusion, we may say that these trials are made by government and by regularly-appointed scientific gentlemen, and that the designs of instruments in use and processes are free to all.

New Points on Cocaine.—Prof. Panas has just given to the Académie his latest experiments with this drug. When he last spoke of it he had said that it had a slight mydriatic action. He now finds that it determines a very large and persistent dilatation of the pupil. He at first thought that it might be that there was a mixture of atropine, but found out that, owing to the high price of cocaine, the persons who prepared it were in the habit of using the leaves twice,—that is, after having taken pure cocaine out of the leaves they pressed them over again, and got a substance that was a mixture of cocaine and some other substance which was not well known, and it is very likely that this unknown derivative of hygrine is the cause of the dilatation of the pupil. This new mydriatic produced a dilatation as large as atropine, but less permanent. In the case of atropine, as is well known, it often persists several days, while with this substance it *lasts only twenty-four hours.* It is not anæsthetic, like cocaine.

Dr. Ollivier brings forward two facts tending to prove that tuberculosis can be transmitted by the respiratory tracts, at least in children. The first case was of a boy, 28 months old, who was allowed to sleep with a child who died of phthisis: he got it shortly afterwards. The second case was of a child 4 years of age that had infantile paralysis, but was otherwise healthy. It was put to sleep in the hospital next to a bed in which several children had died of phthisis, and before long it was attacked with the disease. At the present moment a vote is being taken up in France on the transmissibility of tuberculosis, and all doctors are requested to send their observations to Dr. Vallin, 8 Rue de l'Abbaye, Paris.

Dental Alterations in Morphia-Maniacs.—M. Combes calls attention to the teeth of those unfortunates who abuse the use of morphine. When they become saturated with the drug, it attacks, first, the molars on their grinding surfaces, where it makes a deep cavity. It goes next to the bicuspids, then to the canines, and in these last it excavates quite a deep cavity. This decay does not seem to be painful, and it is not accompanied with periostitis, but it proceeds with great rapidity. M. Combes has noticed the entire set of teeth affected in a year after he saw the first one decayed. This destruction of the teeth coincides with the loss of the hair. The advice given is to suppress the dose of morphine little by little, and use hydrotherapia. For the local state a wash is recommended of a solution of iodide of potassium.

The following solution for the subcutaneous injection of iron in anæmia is recommended by Dr. Martinetti, in whose hands this treatment has met with success. The dose is one cubic centimetre each injection:

℞ Ferri citratis recentis, 2 grammes;
Aquæ laurocerasi, 20 grammes. M.

Dr. Auvard finds the following to be the best antiseptic for use in those annoying cracks in the mammary gland that so often finish by suppuration:

℞ Aquæ destillatæ, 200 grammes;
Acid. boric., 6 grammes. M.

Apply on a compress, and cover over with a wad of cotton. It will take away all pain and inflammation, and does not possess the danger of corrosive sublimate.

Dr. Mauriac gives the following solution for dressing cutaneous eruptions, such as syphilides and mucous patches:

℞ Chloral hydrat., 5 grammes;
Tincturæ eucalyptus, 10 grammes;
Aquæ destillatæ, 500 grammes. M.
S.—Ft. solutio.

It ought to be of interest in catarrh-stricken America to give the favorite prescription of the Paris doctors in most cases of nasal and pharyngeal catarrh. It is used and highly recommended by so great an authority as Prof. Peter, almost daily. It is a powder invented years ago by a then celebrated chemist, to act as an artificial "Eaux Bonnes" water. (This sulphur-water has long been given in this country in all affections of the respiratory tract.) It is called Pouillet's powder, and is used with a spray-apparatus. The writer can recommend it strongly, having seen several cases of post-nasal catarrh greatly modified by its use in a very short time. The following is the composition of the powder:

Sulphate of soda, bicarbonate of soda, sulphate of potash, gum arabic, acid tartaric, of each equal parts. Dry and mix. Dose, ten grains to a quart of warm water. Spray through the nose or throat, as desired, twice a day.

Experiments after Decapitation.—M. Laborde, who has charge of the physiological laboratory of Prof. Béclard at the College of Medicine, was permitted to make some experiments on the body of Gamahut, a murderer who was executed in Paris last week. He was not able to get the body and head for nearly twenty minutes after the decapitation, owing to some religious rites that had to be performed, but as soon as they got the head in the vehicle, which had been prepared with electrical appliances, he commenced his experiments. He at once raised the eyelids and found that the pupil was dilated, and on approaching a candle-light to the eyes the pupil contracted, so that it is an ascertained fact that the pupillary muscle retained its contractility for nearly twenty-eight minutes after decapitation, as reflex action was produced. Dr. Laborde then as quickly as possible opened the skull and put two fine needles in about the level of the region of Rolando. They passed through the cortical substance and went into the white substance. A current was then passed and a raising of the eyelid on the opposite side noticed, and a strong contraction of the inferior maxillary, strong enough to cause a bite. This took, in all, two or three minutes, and then all was quiet, when the strongest current had no effect even when the needle was placed in the medulla oblongata. At the laboratory in the Rue Rollin, Prof. Béclard and assistants were waiting, and experiments were instantly commenced by galvanizing the facial nerve, which caused a contraction of the facial muscles. In accordance with Prof. Béclard's ideas, the room was kept up to a temperature of 35° C. (about the heat of the human body). The result of various experiments is that there is a strong probability of the persistence of excitability of the brain, even after twenty to twenty-five minutes after decapitation.

Notwithstanding the severe laws to prevent the practice of the medical art in France, the dentists have no regulation, and any one who likes can set up as dentist. There are practically no restrictions to their giving nitrous oxide, and, indeed, chloroform. This is partly owing to there being no official school of dentistry in France. Since American dentists have come so much abroad they have helped to start no less than two independent schools of dentistry in Paris, that are well attended, but have no legal existence. Prof. Brouardel, who is president of the Commission of Hygiene, tells us that there is a prospect of a bill being passed to regulate the practice of dentistry in France. There are a number of projects,—one to recognize one of the two excellent schools, to which are attached as professors several American dentists, and another to allow the practice of dentistry to remain free, but a third one is the most likely to go on record shortly as a law. It is to the effect that all dentists must at least take the lower medical degree (*officier de santé*) or become doctors of medicine, so that future dentists will be as good as doctors.

T. Linn, M.D.

BALTIMORE.

MEDICO-CHIRURGICAL FACULTY OF MARYLAND.

THE Medical and Chirurgical Faculty of Maryland is one of the oldest State medical societies in the country. It has just held its eighty-seventh annual session. Notwithstanding its great age, it is still vigorous, and accomplishes each year its share of solid, honest work. During the meeting just closed it has maintained its ancient good fame, and made valuable additions to our knowledge.

The address of the President, Dr. Thomas S. Latimer, reviewed the "Origin and Diffusion of Cholera." After tracing the history of the disease in its home and through its various migrations over the world, he devoted some time to a consideration of the etiology and prevention of cholera in its epidemic manifestations. Dr. Latimer does not regard the specific character of Koch's comma-bacil-

lus as positively established. While it cannot be reasonably doubted that the condition of the drinking-water sustains some close causal relation to the development of cholera, yet this is not the only means by which the cholera-germ (whatever it may be) gains entrance to the body.

The relation of soil-moisture to the spread of the disease was referred to, and illustrations cited to show the influence of varying stages of the ground-water level upon the progress of epidemics.

After expressing the opinion that this country would be invaded during the present or following year, Dr. Latimer proceeded to indicate the measures which should be adopted to prevent the spread of the disease if it should be imported. Quarantine could not be relied upon to keep the disease out. The efforts of the public authorities alone should not be depended upon, but the cheerful, hearty, and intelligent co-operation of all classes of citizens can put the city in such a sanitary state as will present the most unfavorable conditions for the development and spread of the disease.

The library of the Faculty, which has been carefully fostered during the past few years under the direction of an efficient library committee, now numbers four thousand one hundred and seventy volumes. Sixty-four American and foreign journals are regularly received.

An excellent feature of the meetings of the Faculty is the annual oration, which is always delivered by some prominent member of the profession. The orator of the present meeting was Dr. H. Newell Martin, Professor of Biology in the Johns Hopkins University. Dr. Martin chose for his subject "The Physiological Action of Drugs," a topic which he invested with much interest and instruction. Dr. Martin possesses in an eminent degree that quality which his distinguished fellow-countryman, Mr. Matthew Arnold, characterizes as "lucidity." He is a model teacher, and no less distinguished as an original investigator. He reviewed the history of experimental pharmacology, considering at some length the experiments of Magendie which fixed the physiological action of strychnia, the discovery of chloral and amyl nitrite, and the determination of their therapeutic uses by previous experiments on animals. The concluding part of the address was devoted to a defence of vivisection in physiological and pharmacological researches. Dr. Martin spoke feelingly upon this subject, as he has recently been severely and unjustly criticised, both at home and abroad, for his advocacy and practise of vivisection in the institution with which he is connected.

Dr. R. W. Johnson read the report of the Section on Surgery. The report reviewed some of the more marked advances in surgery during the year. The opinion was expressed that the use of chloroform as an anæsthetic should be restricted, in surgery, to those cases where ether is not available.

In a portion of the report from the Section on Obstetrics and Gynæcology, Dr. John Morris created some amusement by his reactionary views upon some of the prominent procedures and operations of modern gynæcology. Trachelorrhaphy, the Alexander-Adams operation of shortening the round ligaments, and extirpation of the cancerous uterus were alike considered unnecessary and unjustifiable. Pessaries were also condemned as irrational devices, not only useless but injurious.

Dr. L. E. Neale, in another portion of the report from this Section, spoke of the value of Braxton Hicks's operation of combined version in placenta prævia. He also exhibited an axis-traction forceps of his own devising. Schultze's method of resuscitating the new-born child in cases of asphyxia was also shown by Dr. Neale. This method is as follows. The child is held by the shoulders, the thumbs resting upon the thorax, the child's head towards the operator and its anterior surface to the front. It is then swung upward so that its feet perform a partial revolution and lie between the head and the operator's body, the trunk being then in a state of forced flexion. The original position is then resumed by a reverse movement, and the repetition of these movements constitutes the method.

Two cases in which fibroid tumors were expelled from the uterus post partum were also related.

From the Section on Practice of Medicine Dr. John S. Lynch reported some observations on antipyrine. Dr. Lynch regarded this drug as the most effective antipyretic agent which we possess. It should be given in doses of fifteen to thirty grains, repeated every three to four hours until the temperature is reduced. In rheumatism the speaker had obtained effects equal to those of the salicylates. Its only disadvantage is the erythematous or urticarial eruption which sometimes accompanies its administration.

Dr. R. H. Thomas, from the same section, also related some favorable experience with kairin in similar cases.

Among other Section reports was one from the Section on Sanitary Science, on the "Non-Necessity of any Radical Changes in the Present Method of Disposal of the Dead," by Dr. George H. Rohé. According to the reporter, cremation is not a necessary measure, considered from a sanitary point of view. There are no trustworthy observations on record proving that cemeteries have a deleterious influence on the health of those living in the vicinity. Infectious diseases do not spread from the buried corpses of those who have died of such diseases. Not only are there no positive observations recorded in

favor of the view that cemeteries are foci of infection, but there is very strong negative evidence opposed to it. There is the further very important objection to cremation that, in cases of poisoning in which suspicion is not aroused until some time after death, all positive evidence of the crime would be destroyed.

From the Section on Anatomy and Pathology Dr. Wilmer Brinton furnished a succinct account of the advances in pathology during the year, dwelling particularly on the discussion over the bacillus of cholera and Friedländer's micrococcus of pneumonia.

Volunteer papers of merit were also read,—"Upon Rectal Medication," "Hydrochlorate of Cocaine in Nose- and Throat-Surgery," "Treatment of Hay Fever," "Stricture of the Urethra," and "Gunshot-Wounds of the Abdomen."

Dr. John R. Quinan, the author of "Medical Annals of Baltimore," was elected President for the ensuing year. G. H. R.

BALTIMORE, May 16, 1885.

CHICAGO.

THE last of our medical schools has closed its doors for a brief season, and comparative quiet now reigns in and about the college-buildings. With each winter session the competition among our local schools becomes more sharp and jealousies more pronounced, each vying with the other in a brilliant array of inducements, wares displayed at attractive prices, often very, very cheap in every sense. The coming student looks the field over, and may indicate to a senior friend some preference. The senior friend may express himself as favorable to the choice, giving the new man assurances that in this particular school the examination for admission is especially easy, and that the faculty at the close of each session hires the largest theatre and secures the services of the biggest brass band to be had, topping all off with a big banquet and the "finest" politicians.

Competition of this kind can hardly result in permanent good to any concerned, and to the thoughtful mind the remedy suggests itself in coalescing all these schools and the organization of a superior institution from better material. A single good faculty might be selected from the several now existing here, and the patronage would be sufficient to maintain the institution at a high standard; then the removal of this unwholesome struggle for existence would give tone and independence. The Harvard Medical School has been enabled to attain its present high standard probably as much from the absence of local competition as from any other cause.

The last report of the Secretary of the Illinois State Board of Health contains some reference to medical education. He states that the applications of the new graduates, beginning with the present quarter, have attracted special attention, because of the indications contained therein regarding the good faith of colleges claiming to exact a preliminary examination of would-be matriculants.

From one college pretending to exact a preliminary examination seven graduates applied to the Board for permission to practise in the State; five of these showed at once and conclusively that they could not properly pass the most simple requirements for matriculation. The report also shows that many schools have a sliding scale that can be adjusted to the tastes and capacities of any man ambitious of medical honors.

Some announce that the preliminary examination is confined to those who may intend to practise in States where this examination is made a test of the standing of the college. Of course, with other matriculants it is made optional.

For the accommodation of those who may not like either extreme, some schools are satisfied with a certificate from the preceptor. So far as the Medical Practice Act concerns the notorious advertising quacks of Chicago, it is a dead letter, there being now a larger number of "lock-hospitals," "infirmaries," "vacuum" and "electrical" institutions for the special treatment of young and middle-aged men than ever before.

A few weeks ago the subject of hypnotism was discussed before the Chicago Medical Society. The process was to be demonstrated upon two or three subjects brought into the meeting for the purpose.

As soon as two of them were hypnotized the members of the Society made a critical examination of each, and found reason to offer some severe criticism, by far the larger number of observers believing the so-called phenomena to be merely expressions of studied parts. The orator appeared much dissatisfied, and further discussion was carried on through the daily papers, the chief object of which would appear to be the advertisement to the laity of a little book on insomnia. The whole matter was not calculated to impress favorably the profession of this city.

The waste of water supplied by the city for domestic and other purposes appears to be enormous. The last report of the Commissioner shows the supply for the year to have been 29,286,000,000 gallons, a daily average of over 80,000,000. The daily consumption of water during the year averaged nearly 114 gallons per capita, and it is no exaggeration to say that one-half of this quantity was unnecessary waste. Notwithstanding this supply is so much in excess of all needs, the Commissioner says that measures for increasing the pumping capacity cannot longer be postponed, and he recommends the construction of a new independent inlet from the lake, together with new and independent pumping-works.

In consequence of the great strain upon the present capacity of the works, the water has been from time to time quite turbid, exciting the suspicions of consumers as to its wholesomeness, some believing and asserting that it contained sewage,—a belief that has been stimulated and fostered by sensational newspaper nonsense, and by statements of doctors needing a little cheap advertising for themselves and their microscopes.

"It's an ill wind that blows nobody good." This water-scare is proving a harvest for mineral-water men and brewers. M.

CHICAGO, May 18, 1885.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

A YEAR ago, at the instance of a number of prominent physicians, a Society was organized, just before the meeting of the American Medical Association at Washington, for the purposes of studying the relations of climate to therapeutics, and of establishing more definitely the real value of health-resorts in the treatment of disease. It was natural that such an organization should attract more especially those who are called upon to treat diseases of the respiratory apparatus, as it is for patients of this class that a change of climate is most frequently prescribed. The papers read at the first meeting were, therefore, devoted to the consideration of the relations of climate to diseases of the air-passages, and especially of phthisis pulmonalis. At the present session the essays were of wider range and in greater number, giving evidence of strength and vitality in the young organization which promises a useful career.

The sessions this year extended over two days. They were held in New York, at the Academy of Medicine; Prof. A. L. Loomis, M.D., President of the Association, occupying the chair.

The first business, after calling the session to order, on Wednesday afternoon, May 27, was the

ADDRESS OF THE PRESIDENT.

The object of the organization of the Association had been stated to be "that representative medical men of different sections might come together, and from their different views and experiences endeavor to determine the therapeutic value of the various localities which have been claimed to have the power of arresting or curing chronic disease of the respiratory organs, and to discuss their etiology, pathology, and treatment." The diseases of the vascular system and the therapeutic value of our mineral springs were also, in his opinion, accessory subjects worthy the attention of the Association. The study of sanitation and appropriate health-resorts for different chronic disorders, he thought, had been too much neglected. Through properly-organized committees the Association might determine the real merits of the various health-resorts which at present and may in the future claim patronage and support. It should endeavor to place those that are found worthy of its endorsement under the supervision of intelligent physicians, who, by the aid of local authorities and perhaps by legislative enactment, may render them more efficient for the cure of those diseases to which they are especially adapted. He referred for illustration of the usefulness of such wise administration to the Adirondack Cottage Sanitarium, under Dr. E. L. Trudeau, situated near Saranac Lake Village. It is an attempt to put within the reach of patients of moderate means, suffering with pulmonary disease, the benefits to be derived from the Adirondack climate. The cottage plan has been adopted, the small buildings being clustered around a commodious main building, where the food is served. The advantages of this Sanitarium were considered in detail, taken from Dr. Trudeau's report.

As the subject proper for the address the President named "The Influence of the Recent Views of the Etiology and Morbid Anatomy of Pulmonary Phthisis on its Climatic Treatment."

Three distinct views of the etiology and morbid anatomy of phthisis prevail at the present time:

1. It is an inflammation of pulmonary substance which may or may not be complicated with tubercle.

2. Tubercle is the primary and essential lesion of all phthisis.

3. It is constituted by the presence of a specific material, which may or may not be accompanied by the histological elements of tubercle, but which always has a specific form of bacillus as the sole exciting cause of its development.

Whatever conclusions may finally be reached as to the exact nature and cause of phthisical processes, he said that clinically we must always recognize two varieties of phthisis:

(1) *Acute Phthisis*, the morbid changes of which are a complex of inflammation and the rapid development of tubercular tissue in the lung-substance.

(2) *Chronic Phthisis*, the essential pathological character of which is consolidation and induration of lung-substance: tubercle may or may not be its primary lesion, but it is usually present in its advanced stages. During the past two years his own examinations of the lungs of those who had died with the clinical history of chronic phthisis have convinced him that in advanced phthisical processes tubercular tissue can always be found, but he was not prepared to state that the development of tubercle is the primary

lesion in all or in the majority of cases. In very many he is confident that a non-specific infiltration of the lung precedes tubercular invasion and furnishes suitable soil for the development of tubercle, as well as for the growth and multiplication of tubercle-bacilli when present. Koch's claim "that the repeated entrance into healthy lungs of small numbers of the specific bacilli of tuberculosis will cause chronic phthisis, and that the simultaneous admission of numerous bacilli will produce acute phthisis," stands as yet unproved.

If phthisis have its origin in an infection, it seems evident, from a clinical as well as a pathological stand-point, that certain preparatory tissue-changes must take place in the lungs before the infection can be received, or, in other words, before bacillary invasion can take hold and become effective for evil. Both experiment and observation seem to show that these bacilli, whether developed inside or outside the body, cannot thrive unless certain conditions are present.

All pathological speculations must be brought to the crucial test of clinical experience; the facts drawn from direct observation must not be allowed to be warped or strained in the slightest degree. By this standard there are three factors which may be regarded as preparatory to the phthisical infection, if such infection shall be found to exist:

First. A state of constitutional feebleness, either inherited or acquired, which diminishes the resisting power of the individual and renders him abnormally susceptible to diseased processes.

Second. A condition of the upper portion of the lungs, brought on by feebleness and slowing of the circulation, which favors the development of diseased processes.

Third. The establishment of localized inflammatory processes in the bronchi, lung-substance, or pleura.

He believed that no one will question the statement that the treatment of phthisis which is to-day attended by the best results is that which has for its object the invigoration by every means possible of the general health, and the avoidance of those conditions which predispose or favor local pulmonary inflammation.

An appeal to clinical medicine for the means of fulfilling these therapeutical indications is answered by "good hygiene, good food, and suitable climate, and those medicinal agents which promote and maintain that normal performance of the digestive and assimilative processes which are essential to healthy nutrition."

The most essential of these is suitable climate, which acts by its invigorating effects upon the general system, and, secondly, by its local effects on diseased lungs in preventing and arresting diseased processes. The essential requisite factor of a good climate is pure air. As pointed out by Jaccoud, there are many points to be considered in discussing the availability of a certain climate other than those which can be found in meteorological tables. Diversity of opinion exists as to the principal feature to be studied in climatology of health-resorts, but the lecturer believed that "purity of atmosphere and consequent freedom from germs" seems to offer a more satisfactory solution of this problem than any other which has been suggested. In the presence or absence of these organisms is to be found an explanation of the therapeutical differences in the air of different localities. Sir John Lubbock, in his address before the British Medical Association, stated that the smallest sphere of organic matter which can be distinctly defined by the microscope is about 1–180,000 of an inch in diameter, and a particle of this size would contain many millions of molecules which may be the germs of organic life. Such a thought opens a wide field for the origin of the microbes of disease, even when we shall have become familiar with the different species of every known infection.

Referring to Professor Tyndale's observations upon atmospheric germs of living organisms, and to the statement of Dr. Andrews that "the micro-organism which excites phthisis, whatever it may be, at certain altitudes is no longer met with," he was led to the observation that purity of atmosphere is the essential therapeutic agency in high latitudes; all elevated regions do not furnish it, however.

Another climatic condition of great importance, and as essential as altitude to the purity of the atmosphere, is *porosity of the soil.* Dr. Bowditch originally called attention to this in 1862, and Dr. Buchanan, in his report to the Privy Council, confirms the statement that *dampness* of the soil is one of the most prolific causes of phthisis to the inhabitants living upon it.

The presence of extensive evergreen forests has been found to have a powerful purifying effect upon the surrounding air. Winds, on the contrary, are prejudicial to the consumptive.

Ozone and atmospheric electricity are elements in the local climatology of health-resorts which deserve careful study: they doubtless have much to do with the therapeutic effects obtained by change of residence.

In conclusion, he considered the state of the patient, and warned against sending patients away from home who were already too ill to be benefited. Hyper-excitability of nervous system, much febrile movement, or serious organic involvement would forbid such a change: there are many who would be injured by the fatigue of travel more than they would be benefited by the climate.

ANTISEPTIC INHALATIONS.

Dr. BEVERLY ROBINSON read a paper recommending antiseptic inhalations in the treatment of chronic bronchitis and phthisis, and exhibited a simple form of inhaler made of perforated zinc, which was cheap, clean, and efficient. The apparatus covered the mouth and nose, and contained an apartment for cotton saturated with the medicament. The inhaler could be worn from half an hour to several hours daily, or all night if desired. The following points in favor of this method of treatment were cited:

1. The apparatus required costs but a trifle, and therefore may be used even by the poorest classes. 2. Medication thus applied may be employed under circumstances where the use of hot or cold sprays is impracticable. 3. There are no risks of future colds attendant upon its employment. 4. The relief afforded by dry-vapor inhalations was, in his experience, frequently greater than that given by the other methods of inhalation. 5. This medication is well adapted to all forms of irritative disease of the respiratory passages.

The only objection that can be urged against their use is want of efficiency of the ordinary form of inhaler, with which the medicated vapors do not pass deeply enough into the pulmonary cells to modify their structure to any sensible degree. To the objection of Dr. A. Hill Hassall (*Lancet*, March 5, 1883) that "the substances used are not very volatile, and that only an inconsiderable amount, if any, enters the lungs," the statements of patients were given as a set-off: not only were patients improved in health, but they also noticed a change in the appearance of the sputa and a reduction in their quantity. Vapors certainly penetrate more deeply than the sprays, for which they have been substituted. He was also of the opinion that the small amount of substance which was not recovered in Dr. Hassall's experiments, and which *possibly* does penetrate the pulmonary air-cells, is sufficient to modify notably, after several days or weeks of more or less continued inhalation, the inspired air in such a manner that it is made comparatively aseptic, and thus we have an influence for good that we can properly estimate only by the evident effects produced. According to the lecturer's observations, pulmonary cough is largely due to irritation produced at the apices, reflex in character.

Dry inhalations were introduced by Dr. N. N. Roberts, of Manchester, England, and were afterwards used by Dr. H. Curschmann, of Hamburg, William Pepper, J. Solis Cohen, and others. His own experience embraced twenty-three cases (of which he had kept records) of *primary catarrhal or tubercular phthisis*. In four of them there were marked pleuritic adhesions. In the remaining cases no statement is made other than the fact that pulmonary consolidation at the apex or apices was present. Nineteen cases of *catarrhal or tubercular phthisis in the second stage* were treated partly by oro-nasal inhalers. Of these, eleven had one-sided softening, in two both apices were affected.

There were six cases of *fibroid phthisis* treated by inhalers, and three cases of *laryngeal phthisis*, in one of which there was commencing carious ulceration of the vocal cords. There were two cases of acute, seven of subacute, and three of chronic, laryngitis, with cases of bronchitis, two acute and three chronic; and five cases of chronic nasal catarrh, with one case of pharyngitis and two of localized pleurisy, and one of paralysis of the tensors of the vocal cords,—making seventy-six cases in all, which were the basis of the present paper.

The results of his observations seemed to show that the most generally useful inhalation in the beginning of pulmonary phthisis is creasote and alcohol (equal parts). The amount is about ten to twenty drops, used two to three times in the twenty-four hours, dropped upon the sponge of the zinc perforated inhaler. The time of inhalation was gradually extended to fifteen minutes; more than this caused irritation and cough. The form of inhaler was like that of Burney Yeo, of London, or S. S. Cohen, of Philadelphia. He described the various forms of inhalers in use, and pointed out some advantages, and spoke approvingly of the simple shield of perforated zinc provided with a small sponge for holding the medicament. He suggested (1) that the holes should be made large, so as to admit air more freely; (2) the posterior half of the inhaler not to be perforated at all, but to consist of one uniform piece on each side; (3) a double valve arrangement to allow the expired air a ready exit from the inhaler without passing again through the sponge. With these modifications the inhaler might be made so as to be worn both day and night, almost continuously.

The general treatment of his patients was malt and cod-liver oil, compound syrup of hypophosphites, and iron and arsenic. He also used counter-irritation, digitalis, quinine, stimulants, and good food. As these remedies had been faithfully tried before without benefit, he could only attribute the subsequent difference in the effects of treatment to the antiseptic inhalations.

The histories and results of a number of illustrative cases were communicated, showing admirable effects for this plan of treatment in ameliorating symptoms in some cases, and arresting disease in others.

DISCUSSION.

Dr. F. C. SHATTUCK, of Boston, in opening the discussion, said that he had not been able to observe very decided results from his own trial of this method, and had found it difficult to keep up. The reported influence in reliev-

ing cough, however, he thought warranted the use of the inhaler, for it is a great desideratum to have the cough properly held in check, especially when it can be done without administering remedies by the stomach and thus disturbing digestion and appetite.

Dr. WESTBROOK thought that the good results of the treatment might be ascribed (1) to the uniform temperature and moisture of the air passing through the inhaler, and (2) to the balsamic vapors, which have a very soothing effect upon the mucous membrane when supplied for a long time. This is shown in relieving the irritability of the larynx and reducing cough, and the benefit in chronic bronchitis and phthisis may be ascribed to this source. He noticed that the lecturer did not use this alone, but also relied upon constitutional treatment by cod-liver oil, malt, etc. The inhalation lessens irritability of upper air-passages, reduces the amount of secretion, and gives the patient rest. He did not think that facts would warrant the statement that more cough attends disease of the apex than lower down in the lung.

The PRESIDENT stated that cough in phthisis, especially the violent paroxysmal attacks of coughing, is very largely due to pleuritic changes, and these pleuritic adhesions are more likely to occur in the upper part of the lung. Often they cannot be detected by examination of the lungs. Inhalations do good as anodynes to the air-passages, especially moist inhalations. He cautioned against the use of strong inhalations, as they might cause irritation. He had seen hemorrhages after such inhalations, but did not attribute the hemorrhage to the inhalation: he noticed it as a coincidence.

Dr. ROBINSON, in reply to a question from Dr. Reed, said that he had used ether both alone and in combination with balsams, but found it irritating, and prefers chloroform (gtt. ij). He believed that the vapor entered the air-cells, on account of the changed and diminished secretions. The principal object is to make the air inhaled as pure as possible. If the patient cannot get to the mountains, the mountain-air must be brought to the patient. He reiterated the statement that cough is more frequent when the apex is involved than in affections of other portions of the lung. He could not accept the view that pleuritic adhesions are the common cause of cough; he had not found it so post mortem; and, moreover, if the cough had such an organic cause it would not subside so quickly as it does when the patient goes to the mountains from the city.

Dr. W. C. JARVIS, of New York, read a paper entitled

CATARRHAL AFFECTIONS OF THE NASAL CAVITIES AS A CAUSE OF PULMONARY PHTHISIS.

After describing the anatomy of the parts and the effects of imperfect drainage of the nasal sinuses, he announced the following conclusions:

In determining the relations of nasal catarrh to pulmonary phthisis, he had, in the order of its origin and sequence, commenced by observing and interpreting the catarrhal manifestations as they occur in the nares, and had traced the gradual extension of the nasal disease to the larynx. Within the larynx he discovered the impress in the form of a chronic irritative hyperæmia of the larynx, brought about by the combined action of catarrhal discharges, habitual mouth-breathing, and inflammatory extension. Attacks of acute laryngitis, sometimes followed by bronchitis, are often observed in individuals exhibiting chronic hyperæmia of the laryngeal lining membrane. He recognized the deviated septum as a most common cause of nasal catarrh, producing this disease by pressure and irritation, interference with nasal drainage, and unequal distribution of the nasal respiratory functions. He pointed out the importance of heredity, as a factor responsible for the existence of certain forms of deviated septum, and noted the conditions indicating the hereditary character of these abnormalities.

Viewing the larynx as really the upper portion of the lung, although divided from it on artificial anatomical grounds, we are enabled to determine approximately by the appearance of the laryngeal and tracheal mucous membrane what conditions may exist beyond the line of laryngoscopic vision, and thus complete the pathological picture, beginning in the nares and ending in the lungs.

Appended to this paper were the clinical reports of a few illustrative cases, showing the benefits of treatment directed to the upper air-tract in chronic pulmonary disease.

DISCUSSION.

Dr. BOARDMAN REED said that from the stand-point of the general practitioner he could see no special connection between nasal catarrh and phthisis. Both were frequent, but he had seen them separate more frequently than combined. He did not see any necessary connection between them.

Dr. ROBINSON thought that the title of the paper was open to criticism. He did not think that clinical experience warranted the view that there is any direct connection between the two morbid states, such as cause and sequence.

Dr. GOODWILLIE had not been able to determine any direct connection between the depth of the vault of the palate and the nasal chambers. He believed it to be caused principally by the greater development of the alveolar ridges in some. This did not affect the nasal cavities, however, but if the intermaxillary bone were pushed back it would produce contraction of the nasal meatus.

Dr. JARVIS said that he had not attempted to prove the relationship of nasal affections to phthisis, as he thought that such a connection

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had been pretty well settled, as it has been accepted by Niemeyer, Billroth, and Koch, in Germany. He had merely shown how such results might follow. He had been particular in his statement that not all high palates were accompanied by nasal catarrh, but only those with the abrupt elevation of the middle ridge. The existence of an intermaxillary bone is doubted by some of the best embryologists.

Dr. ROBINSON, by permission, said that he did not wish to criticise the paper, but merely to state that the conditions pointed out were quite rare, while phthisis is common. With due respect, he did not feel willing to accept the authorities quoted, who are not accustomed to looking into the larynx or nasal passages.

The President announced as members of the Nominating Committee Drs. F. C. Shattuck, Boardman Reed, B. F. Westbrook, J. C. Wilson, and E. D. Hudson, Jr.

A NEW INSTRUMENT.

At the evening session Dr. JARVIS exhibited a scoop constructed for the purpose of removing adenoid vegetations from the vault of the pharynx. It is made of steel, cylindrical and flattened at the extremity, which is directed upward so as to pass behind the soft palate. He had also found it useful in removing carcinomatous masses.

Dr. BOSWORTH thought that the instrument would be an improvement upon the gouge. He said that the more he saw of cases of nasal catarrh in children, the more he became convinced that the majority of them—say nineteen out of twenty—are due to hypertrophy of the glandular tissue, and not due to hypertrophy of nasal mucous membrane. Therefore he thought remedial measures should be directed to the pharyngeal vault rather than to the nasal passages.

FURTHER CONSIDERATION OF PNEUMATIC DIFFERENTIATION, WITH DEMONSTRATION OF THE PNEUMATIC CABINET.

Dr. H. F. WILLIAMS, of Brooklyn, exhibited an iron cabinet, with glass front, large enough to hold a patient in a sitting posture, which was so arranged as to permit partial exhaustion of the contained air and the admission of air under pressure for inhalation. The paper described the apparatus and the principles of treatment (already described in *Medical Record* for February 13). He believes that there is a position in our therapeutics for pneumatic differentiation in the treatment of pulmonary disorders, and this method presents some points worthy of further inquiry. The five cases referred to in the previous article on the subject are still doing well. He insisted upon the importance of early treatment of phthisis. Children should be taught to breathe properly. Many persons pass their lives in seeking what they can never attain, —perfect health. In many cases relief and improvement is all that can be expected. The results from the pneumatic treatment have been very satisfactory. It is possible that it might be abused by unskilful hands, and do injury, but he had never witnessed any bad results attributable to the use of the cabinet. One case used the treatment for some thirty times safely, but hemorrhage came on shortly after stopping the treatment. He had never seen a hemorrhage come on during the use of the cabinet. In connection with the cabinet, medical inhalations are practised under pressure, and the usual constitutional treatment employed. The method is applicable not only to phthisis pulmonalis, but also to emphysema.

Remarks were made by the PRESIDENT, Dr. ARMOUR, of Brooklyn, and others.

HOME-TREATMENT OF CONSUMPTION.

Dr. F. C. SHATTUCK, of Boston, read a paper advocating a more intelligent home-treatment of consumptives, in view of our advanced knowledge of the nature and course of the disease. He compared the statement made by a French professor twenty years ago, "The treatment for phthisis is opium and lies," with the recent teaching by Jaccoud that "pulmonary phthisis is curable in all its stages." Cases of consumption get well under the climatic treatment, and even under no treatment at all. By statistics taken from the Massachusetts State Board of Health Reports, he demonstrated the fact that there has been a gradual, though not regular, decline in the mortality from this disease from 1857, when it was 33.93, to 1883, when it was 29.90 per thousand of all classes of the population.

"Phthisis—or the bacillus tuberculosis, if you please—is one of those weeds which flourish best upon poor soil, but at the same time it exhausts what little virtue may be remaining in the soil."

The lecturer then considered in detail the regimen suited to a consumptive, and advocated the use of palatable, nutritious, easily-digested food, taken frequently; moral treatment; sensible dress, including woollen under-garments; fresh air, exercise, sun-baths, congenial occupation, cleanliness of person, and respiratory gymnastics.

The medical treatment was then outlined. Cod-liver oil is to be avoided if the tongue is coated or digestion defective. He recommends a combination of morphine, atropine, and capsicum for the relief of cough, diarrhœa, and night-sweats. Quinine is useful in large doses for the fever, either by the mouth or hypodermically (in the latter case the hypobromite is the best preparation). The salicylate of sodium is also valuable where the fever is caused by resorption.

The paper was favorably discussed by Drs. ARMOUR, KRETSCHMAN, and ROBINSON, the latter regretting that the author had omitted

three methods of treatment: (1) forced feeding, "lavage and gavage;" (2) intra-pulmonary injections; (3) antiseptic inhalations.

On the second day the morning session was opened by the reading of a paper sent by CHARLES DENNISON, M.D., of Colorado, entitled

A RULE FOR THE EVEN DIVISION OF CLIMATE, BASED UPON THE AVERAGE OF THE COMBINED ATMOSPHERIC HUMIDITIES IN THE UNITED STATES.

This was read, in the absence of the author, by J. H. Tyndale, M.D., of New York.

It was a continuation of a paper presented last year, and was accompanied by maps showing graphically the relative dryness, mean temperature and elevation, direction of winds, and average amount of sunshine in different parts of the United States, made in conjunction with the Signal Service Bureau.

He believed that the most important quality of climate is dryness. The range of temperature is of greater moment than the mere statement of averages or means, which are very misleading.

The President, in opening the discussion, said that there was a great deal of interesting information contained in the maps, but they did not include everything to be considered in comparing health-resorts. He referred to the porosity of the soil as a very important feature. Dr. Bowditch in 1862 had shown the relation existing between humidity of the soil and pulmonary disorders. It is not the amount of rainfall or the humidity of the atmosphere so much as the natural drainage of the soil which is to be considered. Apparently everything theoretically would be against the Adirondack region as a health-resort for consumptives; but the porosity of the soil, there being no clay in it, makes it what it is.

Dr. BELL thought that reliable statistics contradicted the views that dryness is the most important point in the atmosphere to the consumptive, and that the great danger is moisture. The number of deaths per thousand of population from phthisis pulmonalis is about the same in Colorado as in Florida, which is very damp. Forests are great storehouses of moisture, and yet they are salutary. At sea the atmosphere is saturated, and yet from the reports of the Marine Hospital Service of England it has been shown that the number of deaths among sailors from consumption is ten times less than among similar numbers on shore, and if compared with men of the same age the death-rate is only one-sixteenth that of landsmen. Moisture is therefore not the most dangerous element in an atmosphere. The writer should also have referred to ozone and atmospheric electricity as important factors in a good climate. In conclusion, he opposed the idea that excessive dryness and altitude are the essential qualities of a good climate for consumptives.

Dr. BOARDMAN REED was glad to hear the protest of the preceding speaker against regarding altitude and dryness as essential in the treatment of consumption. He thought that the patients are benefited by agreeable society as well as by pure air. The sea-shore has a long-established reputation as a health-resort, and his own observation was that in Atlantic City many pulmonary patients do well. He referred also to the ozone developed by the spray beating on the shore.

Dr. TYNDALE, in conclusion, repeated the statement that altitude, dryness, and equability of temperature were the main points worthy of consideration in the ideal climate for consumptives.

GEOGRAPHICAL DISTRIBUTION OF PHTHISIS IN MICHIGAN, WITH SKETCH OF TOPOGRAPHY.

This paper was contributed by E. L. SHURLEY, M.D., of Detroit, Michigan, and was read by the Secretary.

Regarding the telluric and geographical aspects of health-resorts for phthisis as of great importance, Dr. Shurley undertook a systematic investigation of the climatic qualities of Michigan. Without attempting an analysis of this valuable contribution, it may simply be noted as a significant fact that in those counties where the soil was loose and sandy and permitted free drainage he could not discover that a single case of pulmonary phthisis had originated.

"The Treatment of Laryngeal Tuberculosis" was read by title in the absence of its author, Dr. E. F. Ingalls, of Chicago.

"The Problem of Acclimatization" was the subject of a paper contributed by I. H. Platt, M.D., of Brooklyn. (See page 676.)

At the afternoon session J. C. Wilson, M.D., of Philadelphia, read a paper entitled

REMARKS UPON THE CLIMATE OF FLORIDA.

Dividing the peninsula into four parallel strips or regions, we have (1) the Atlantic seaboard, (2) the St. John's River, (3) the elevated pine-lands forming the water-shed of the State, and (4) the Gulf coast. The great characteristics of all these regions are mildness and equability. Within a year the railroad has opened up the Gulf coast, which possesses special peculiarities. Here is the perfection of warm maritime climate, from Cedar Keys to Punta Rassa. The atmosphere is pure, free from dust, and rich in ozone; the temperature mild and equable; the movement of the air moderate, but continuous. The air is remarkably dry, the rainfall is small. The small peninsula terminating in Point Pinellas on Tampa Bay offers especial attractions as a sanitarium. There are no frosts and no malaria, and the water of the bay is sufficiently warm to permit bathing all the year round.

JOHN M. KEATING, M.D., of Philadelphia, also read a paper upon the same subject, but paying especial attention to the lake region as a winter health-resort. A caution was expressed against sending patients to Florida without definite ideas of their destination. Both St. Augustine and Jacksonville are undesirable, as a rule, for consumptives. The accessibility of Florida gives it especial value for sanitaria.

THE RESULTS OF THE HOME-TREATMENT OF CONSUMPTION CONTRASTED WITH THOSE OF CHANGED RESIDENCE AND CLIMATE

was the subject of a paper read by Dr. E. D. HUDSON, JR., of New York.

The pathology of phthisis was discussed according to recent views, and a favorable view taken of the possibilities of home-treatment with the aid of modern appliances.

HAY FEVER AND ALLIED AFFECTIONS.

F. H. BOSWORTH, M.D., of New York, called attention to the etiology of hay fever and the relation of nasal hypertrophies to spasmodic attacks of cough. He denied that there was any structure in the nasal passages to which the name erectile tissue could properly be applied. He advised operation by cautery and the correction of abnormalities in the nasal chambers in cases of hay fever and allied affections.

THE HISTORY OF THE STETHOSCOPE.

Dr. D. M. CAMMANN read a paper with this title, and presented a modification of the Cammann Stethoscope.

Laennec, if he did not originate the idea of the stethoscope, made it practically useful. His first instrument was a cylinder of wood perforated by a bore three lines wide. This was modified by Piorry, who constructed a more slender instrument. Trumpet-shaped ends were first devised by Dr. Williams about 1843. Descriptions of many non-aural stethoscopes made of various materials are found scattered through the files of medical journals. About 1850, Landouzy, of Paris, constructed a binaural instrument with flexible tubes. Previous to this Dr. Williams had used a double stethoscope, but it was inflexible and awkward of application. The stethoscope of Dr. Leared, shown at the International Exhibition of 1851, was an improvement on these.

In the same year Dr. Marsh, of Cincinnati, patented a double stethoscope. Dr. Cammann was familiar with the principle of these instruments. His binaural stethoscope, therefore, was not a new invention, but was and is now the best instrument of the kind devised. It was perfected in 1852, and described in the *New York Medical Times* of January, 1855. Reference was made to the differential stethoscope of Scott Alison, the hydrophone, and the stethoscope of Constantine Paul.

The modification of Cammann's stethoscope can be screwed on in place of the usual chest-piece. In the pectoral end is an air-chamber, which is completely closed by pressure against the chest. Connected with this chamber by a small tubular opening is a rubber bulb, through which the sound-conducting tube passes. By pressure upon this bulb, when the instrument is held in position, the air is exhausted in the hollow chamber and the stethoscope is held firmly to the chest-wall. It requires some practice to use this modification successfully. By its use the closest possible contact is obtained with the parts under examination. Sound, in passing to the ear, is conveyed through two hollow chambers,—one in the chest-piece and one in the rubber bulb,—both of which act as resonators and increase its intensity. Not only is the intensity of sounds increased, but their true quality is better appreciated. Another advantage is that the two hands of the auscultator are left free to practise the method of auscultatory percussion, a method which has not yet received the attention it deserves, and which, it is to be hoped, will come into more general use.

At the business meeting the following officers were elected:

President.—Wm. Pepper, M.D., of Philadelphia.

Vice-President.—F. J. Knight, M.D., of Boston.

Secretary and Treasurer.—J. B. Walker, M.D., of Philadelphia.

Next place of meeting, Philadelphia, in May, 1886, upon a day to be decided by the Council.

THE AMERICAN MEDICAL ASSOCIATION.

(Continued from page 664.)

SECTION ON SURGERY AND ANATOMY.

DR. DUNCAN EVE, of Nashville, Tennessee, Chairman; Dr. C. B. King, of Allegheny, Pennsylvania, Secretary.

False Doctrines in the Treatment of Frac-

tures, by John B. Roberts, M.D., of Philadelphia, Pennsylvania. Among the doctrines or practices which the author considered to be bad, were the primary application of a bandage before putting on a splint (usually unnecessary and often does damage); too early passive motion; splints kept on too long; too much delay in trephining fractures of the skull; axillary pad in fracture of the clavicle, and interosseous pad in fractures of the forearm, which are useless.

This paper was successful in eliciting a general discussion.

The Treatment of Compound Fractures by Free Drainage and Wiring of Bones was the title of a communication presented by Dr. W. P. Verity, of Chicago. He recommended a conservative course in the treatment of such fractures, and reported cases in which by wiring loose fragments together he had obtained successful results. The paper was illustrated by diagrams.

Dr. H. O. Marcy read a paper answering affirmatively the question, "Do we find from Micro-Organisms in Closed Cavities a hitherto Unsuspected Danger to Surgical Lesions?" He had found several instances of micro-organisms existing in ovarian fluids.

Surgical Treatment of Cysts of the Pancreas was the theme of a valuable paper read by N. Senn, M.D., of Milwaukee, Wisconsin. He concluded, after a careful and exhaustive review of the subject, that cysts of the pancreas are true retention-cysts; cicatricial contraction or obliteration of the common duct or its branches, and impacted calculi, are most frequent causes of cysts of the pancreas; a positive diagnosis is impossible, a probable diagnosis between it and other cysts amenable to surgical treatment is enough for practical purposes; and, finally, that the formation of a pancreatic fistule under antiseptic precautions commends itself as the safest and most expedient operation in these cases.

Dr. Joseph Ransohoff, of Cincinnati, reported an instance of *Two Ovariotomies on the same Patient*, in a woman 26 years of age at the last operation, the previous one having been done two years before. At the first operation the right ovary was removed and the left allowed to remain, although it was increased in size. The author of the paper inclined to conservatism, both because of the slight mortality of the second operation as compared with double ovariotomies, and because in some cases of consecutive ovariotomy the patients had conceived and borne children in the interim.

Dr. R. H. Jenkins, of Georgia, reported a case of *Necrosis of the Tibia and Fibula of Ten Years' Duration*, which was cured by removal of the dead bone. The patient made a good recovery and has a useful limb.

Colo-Proctitis treated with Hot Water Douches and Stretching or Division of the Sphincter Ani was the subject of a paper by Dr. A. Y. P. Garnett, of Washington, D.C., in which accounts were given of several cases greatly benefited by a milk diet, and the irrigation of the rectum with hot water containing opium or ipecacuanha.

Several papers were read by title, among which were "Clinical Observations on the Surgical Treatment of Varicocele," by M. H. Henry, M.D., of New York, and "A New Combined Trocar and Canula and Operating Needle," by H. L. Getz, M.D., of Marshalltown, Iowa.

Dr. Formento, of Louisiana, read a paper on *Autoplasty*, which was illustrated by several cases successfully operated upon.

A patient with a growth in the temporal region was shown to the Section, and after examination by a committee it was pronounced a fibroma.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THE Thirty-Sixth Annual Meeting was held, May 27, 28, and 29, at Scranton, with the Lackawanna County Medical Society. The session was well attended. Dr. Ezra P. Allen, of Bradford County, President of the Society, occupied the chair.

First Day.—Upon calling the meeting to order at the opening of the session, Dr. I. F. Everhart, Chairman of the Committee of Arrangements, delivered an Address of Welcome, and presented the programme for the meeting. Hon. Alfred Hand then delivered an address on the part of the citizens of Scranton, which contained a humorous comparison of the relative advantages and disadvantages enjoyed by the members of the two professions of law and medicine.

Dr. Henry H. Smith read a telegram announcing the passage of the act establishing a State Board of Health by the Legislature at Harrisburg.

Dr. Benjamin Lee, of Philadelphia, offered the following resolutions, which were adopted:

"*Resolved*, That this Society has learned with great satisfaction of the final passage through the Legislature of this State of the act to create a State Board of Health, and that it hereby tenders its thanks to the Hon. Robert Adams, Jr., Senator from Philadelphia, and to Hon. Henry K. Boyer, Representative from Philadelphia, for their earnest, untiring, and successful efforts to secure to the people of this great commonwealth so important a safeguard as is anticipated from the organization of this Board.

"*Resolved*, That the Secretary be instructed to mail promptly a copy of this resolution, duly attested by the appropriate officers of the Society, to the above-named honorable gentlemen."

These were unanimously adopted, amidst much enthusiasm.

Drs. D. Colvin and C. G. Pomeroy, of the New York State Medical Association, were introduced and invited to take part in the deliberations. Each made brief remarks.

Dr. Buzby, of the New Jersey Association, was extended a similar courtesy. He returned his thanks, and invited the Society, as a whole, to attend the annual meeting of the New Jersey Association to be held at Long Branch.

Dr. John B. Roberts, of Philadelphia, presented the report of the delegates from the Pennsylvania State Society to the American Medical Association in New Orleans, and Dr. M. O'Hara presented the report of the delegates from the Pennsylvania Society to the New Jersey State Medical Society.

There were no further reports regarding State Societies.

The report of Dr. John G. Lee as Corresponding Secretary, and one from the Publication Committee, were received and approved.

Dr. Germer, Health-Officer of Erie, and Prof. Osler, of the University of Pennsylvania, who were present, were invited to take part in the proceedings.

Drs. Atkinson and Lee, a majority of the Committee on a State Board of Health, presented a report detailing their successful efforts in having the Health Bill passed by the Legislature.

The Committee was discharged with thanks, and $49.25, expenses, ordered to be paid.

On motion of Dr. Smith, a memorial was ordered to be prepared and signed by the members of the Society, requesting Governor Pattison to sign the bill.

The Treasurer, Dr. Benjamin Lee, presented his annual report.

Drs. Paine and Bishop were appointed auditors of the Treasurer's accounts.

Amendments to the constitution, proposed by Dr. O. H. Allis, providing for a Librarian for the State Society and providing that debate on essays shall come up under the head of unfinished business, were laid on the table.

Dr. James Tyson, chairman of the Committee on Medicine, read the report of the Committee on the Collective Investigation of Disease, especially directed to pneumonia. He suggested that two additional members of the committee be appointed, on account of the amount of labor required in gathering data.

On motion of Dr. Cohen, Prof. Tyson's suggestion was adopted.

Dr. Henry H. Smith offered a resolution to the effect that any county medical society that shall seek general medical legislation at Harrisburg without having previously obtained the consent of the State Society shall forfeit all its connections with the State Society until it is relieved of its contempt by the Judicial Council. This was done on the ground that it was necessary that the State Society shall be the judge of general legislation. The resolution was adopted.

Dr. Atkinson reported that the auditors had audited the accounts of the Treasurer and found them correct. The report was then adopted.

A partial report was presented from the Committee on Lunacy and Idiocy, especially directed to the management of the early stages of mental disorder.

The address of Dr. S. S. Schultz, of Danville, on "Mental Disorders," was devoted especially to a consideration of the reason for that specialty in medicine concerned with the treatment of insanity, which he declared is found primarily in the peculiar functions of the diseased brain, whose disturbance is followed often by erratic and dangerous conduct. He claimed that such evidence of brain-disorders required the seclusion and rest only afforded by a hospital. Insanity, he contended, is not a disease, but a combination of symptoms, like diarrhœa or dyspepsia. These symptoms are the result of disorder in the instrument—the brain—through which the mind acts. These disorders may be of many kinds, but the laws which govern them are the same as those governing diseases in other parts of the body. The necessity for treatment is, therefore, the same as in other diseases. The lecture was illustrated by reports of cases.

The Address on Hygiene was read by Dr. J. G. Richardson, of Philadelphia.

Dr. Charles S. Turnbull, of Philadelphia, delivered the Address on Otology.

His experience had taught him that, in the treatment of most cases of diseases of the ear, lack of success was due oftener to sins of commission than to those of omission.

This was especially the case in the ear-diseases of childhood. He deprecated syringing, and the use of water in any way, in connection with the cleansing of the external auditory meatus. He urged parents to cease their efforts to cleanse children's ears by the use of soap and water, and told how useless is the little instrument called the "aurilave." He mentioned also some of the dangers accompanying the wearing of ear-rings.

One especially valuable hint to mothers, as well as to those who are to advise them, is that concerning the rearing of young children, whose noses are usually allowed to take care of themselves.

Every child should be taught to blow its nose. If it has not been or cannot be taught to free the nostrils of mucus, its chances for retaining hearing-power in case of the occurrence of acute or sub-acute disease of the middle ear are much poorer than in the case of one that has learned to blow its nose. Handicapped by being unable thus to free its nostrils, a child cannot possibly inflate the tympanum or middle ear, and clear the

Eustachian tubes, so that the dreaded exanthemata must as a rule mean deafness.

Forcible dilatation, by Politzer's method, is generally sufficient in the case of adults, but will not answer for children, who only become terrified by the presence of any one who has been so injudicious as to attempt its use.

For children he recommends that one nozzle of an ordinary auscultation-tube be protected by a perforated "lead-pencil rubber cap" slipped upside down over it. This is called the nose-piece, and can be held firmly, as it plugs one nostril, and acts as a point of support upon which to close the other. As the child cries lustily or else with its mouth blows out (as if to blow out a light), the surgeon, having the nozzle at the other end of the tube in his mouth, blows a quick, short blast into the nasal passage, which invariably inflates both ears. Once assured that the procedure does not cause them pain, children enter into the spirit of it, and blow with a will.

The great secret in the treatment of all discharges from the ears is dependent upon the fact that fermentation and putrefaction soon occur in the moist auditory meatus. So long as a discharge is not allowed to ferment, it will not become fetid, seldom even purulent.

Eczema of the auricle and external auditory meatus, whether in a child or in an adult, is generally a disease of neglect or injudicious interference. In children it is apt to be the former case, in adults the latter, but it is usually induced by the use of soap; in adults it is generally caused by meddlesome attempts at ablution. In children eczema readily yields to treatment, while in adults it is more stubborn, recurring monthly perhaps for several years. Mild cases yield to the constant application of a weak mercurial ointment, while chronic cases require the application of a saturated solution of nitrate of silver.

Boric acid, if properly used, still holds its own as a specific for chronic otorrhœa, though not for acute otorrhœa (except when the discharge is fetid).

This latter class of cases calls for the aqueous boric acid solution.*

For the army of those unfortunate beings suffering from deafness and roaring in the ears, and classified under the head of plastic (cicatricial) inflammation of the middle ear, all treatment remains experimental. Instrumental interference, such as the use of the Eustachian catheter or bougie, the forcible introduction of vapors, etc., except in the hands of an expert, Dr. Turnbull considers meddlesome, as well as useless. Where Valsalva's or Politzer's method cannot be made available, further interference is apt to be harmful.

In the treatment of tinnitus aurium the different preparations of the erythroxylon coca are to be especially lauded, not only because of their direct local effect on the throat and rhinopharynx, but also for their anæsthetic effect on the mucous membranes generally. In this connection hydrobromic acid in conjunction with bromide of sodium is not to be forgotten, especially in cases of tinnitus due to disorders of cerebral circulation dependent upon nervous irritations.

Diseases of the internal ear characterized by profound deafness, and sharp, shrill, ringing sounds, are usually caused by specific disease or traumatism, and seldom yield to treatment. Those of syphilitic origin, which might have yielded to a full specific course, are generally of such long standing that little else is left to be done other than to make a diagnosis.

Dr. Turnbull called especial attention to a disease not unlike boiler-maker's deafness, which he styles "mill-operative's deafness." This is a disease of the auditory nerve, caused by a prolonged succession of concussions and irritation from the rattle and din of the machinery, the first grave and characteristic symptom of which is known as paracousis Willisiana, or the power of being able to hear distinctly only during a noise.

In conclusion, he urged practitioners who are unable to obtain skilled aid immediately not to prescribe without illuminating the external auditory canal with a concave mirror and searching for the cause of deafness. Impacted or inspissated cerumen can always be safely removed by syringing with warm water, which procedure is the only one in which the use of water is permissible. Even here, however, had water not been injudiciously used in the first place, the wax would not have become packed.

Dr. Edward Jackson, of Philadelphia, read a brief communication on the "Diagnosis of Incipient Cataract."

Cataract, though perfectly amenable to treatment, he said, is still one of the most dreaded diseases of the eye. This is mainly because it is blamed for the effects of other lesions. This would be largely avoided if practitioners of medicine were generally more skilful in its diagnosis. Subjective symptoms are of little importance, except as they point to other affections complicating cataract. In this connection, it should always be borne in mind that the uncomplicated advance of cataract is always absolutely painless. The results of examination of the pupil by oblique illumination are often inconclusive or unreliable. The best way to detect partial opacity of the crystalline is to throw into the eye the light from an ophthalmoscope-mirror, and then to look at the general red glare obtained from the back part of the eye. In doing this the surgeon looks through the suspected lens, and all opaque portions become noticeable as black spots, lines, or patches, in the red circle of the pupil. For such an examination no costly ophthalmoscope is needed. Any piece

* Transactions of the Penna. State Medical Society, 1882, p. 189.

of looking-glass, with a hole scraped in the silvering for the observer to look through, suffices perfectly.

But when lens-opacity has been recognized, the diagnosis of cataract is only just begun. The practical question is, Does the lens-opacity cause the symptoms complained of? Incipient cataract might be present and cause no inconvenience whatever. On the other hand, when cataract exists, other lesions of the eye—nerve-atrophy, choroiditis, or ametropia—are very apt to be present. The complete diagnosis of cataract demands ability to recognize all conditions that may impair vision, with the judgment and information necessary to assign to each its proper share in the causation of the patient's symptoms. The best measure of the extent to which lens-opacity interferes with a patient's seeing is the extent to which it interferes with the surgeon's inspection of the optic disk and retinal vessels of the affected eye.

"Some Points in Ophthalmology which may be of Interest to the Physician in General Practice" were considered in the next paper, read by Dr. F. D. Castle, of Philadelphia.

The author, in this paper, called attention to some points in ophthalmology which may be of interest to physicians engaged in general practice. The first is, how to determine whether a case of blindness or defective vision is due to cataract or not, if the appearance of the pupil is such as to warrant the belief that the lens is opaque.

After alluding to the fact that it has not infrequently happened that a case has been diagnosticated as cataract, simply in consequence of a somewhat grayish appearance of the pupil, in which the lens was either not at all or only to a slight extent opaque, and, even in the latter case, not sufficiently so to explain the serious defect of vision existing, the author urged the advisability of one always being sure of the diagnosis in cases in which there seem to be grounds, in the appearance of the pupil, for pronouncing the defective vision to be the result of cataract. If the patient is told that he has cataract, which all the world knows to be curable by operation, and it should turn out that the case was one in which the grayish appearance of the pupil was only deceptive, and the mischief causing the defective vision was seated farther back, in the fundus of the eye, and perhaps of an incurable character, the patient's disappointment would be great and the reputation of the physician who called the case one of cataract would not be benefited. Such mistakes can positively be avoided by a careful examination, and this examination does not necessitate the use of the ophthalmoscope, the skilful use of which will always, in all probability, remain confined to the ophthalmic surgeon for the most part, as the art of using the instrument must first be acquired, and practice is necessary to maintain the skill that has been gained in its employment. In the examination just alluded to, particular attention must be paid to the following three points in every case in which cataract is suspected, where the appearance of the pupil is so slightly opaque as to leave room for doubt. The first of these points is simply a recognition of the fact that in old age the pupil loses often the deep jetty-black hue which it has in early life. A slightly grayish shimmer is, therefore, scarcely to be considered as an abnormality in the pupils of old people. If, in a case of this kind, focal illumination be employed,—*i.e.*, if the rays from a gas-burner in a darkened room be condensed by a strong convex lens in such a way that the apex of the cone of light thus formed falls upon the pupil,—so intense a grayish reflex will stream from the pupil that an uninitiated person might consider the diagnosis of cataract as confirmed, although no centricular opacity whatever exists.

The second point, and a very important one, has reference to the perception of light. The blindness in cataract is never absolute. A person blind from cataract only, the other parts of the eye being healthy and the cataract ripe, should be able to perceive the light of a candle in a darkened room at a distance of twelve feet. The field of vision, as tested by moving a candle round in front of the eye, should also be free. The author adduced a case which had been pronounced cataract, in which the pupil appeared somewhat grayish, but perception of light was absolutely wanting. If the light-perception had been tested in this case, the faulty diagnosis would not have been made.

The third point involved in the examination of the lens has reference to the importance of the image of a flame formed by the posterior capsule of the lens. The author showed how to produce and recognize the image of the cornea and posterior capsule. In the case of a ripe cataract it will be of course impossible to produce the image of the posterior capsule, as the opaque lens-substance in front of the latter will prevent the penetration of the light-rays. In a case of partial cataract the image of the posterior capsule may be visible in some portions of the area of the pupil, but not in this. In case the lens is very slightly but differently clouded, the image of a portion of the capsule may be indistinctly visible, its edges being blurred and ill defined, however, and not as sharp as under normal conditions.

The second point considered in this paper was the probable diagnosis of cases of eye-strain,—*i.e.*, cases in which the symptoms may be relieved by the adaptation of suitable glasses. The author discussed the symptoms which are more or less common to all cases of eye-strain, whether dependent upon hypermetropia, astigmatism, myopia, etc., by paying attention to which the general practitioner will recognize the character of the

trouble at a glance with the same facility as the specialist.

The third and last subject of discussion in the paper was the necessity for the early recognition of acute glaucoma and the avoidance of the use of atropia in any such case. It has occasionally happened that physicians, not at once differentiating acute glaucoma from other inflammatory affections of the eyeball, and acting on the general principle that atropia is of service in many inflammations of the globe, have used this drug as a palliative, when under the circumstances a speedy operation was indicated, and eserine should have been employed if it were thought desirable to use "eye-drops" at all. If the physician is at all doubtful about the diagnosis, he should employ agencies of which he is certain that they cannot by any possibility do any harm until competent assistance is obtained. Warm or cold compresses may be used, as may be most grateful to the patient; leeches to the temple, if the eye is very red and there is great pain, morphine, etc. As mydriatics may excite an attack of glaucoma in an eye which has a predisposition for it, it is evident that they should not be used when the eye has been attacked by the disease.

MISCELLANEOUS BUSINESS.

Dr. P. D. Keyser, of Philadelphia, brought to the notice of the Association the case of a physician of Scranton, who obtained his diploma and registered under peculiar circumstances. Finding a diploma necessary for registration, this man, it was said, had gone to Cleveland, and in two months' time had returned with a diploma, which he had had countersigned by the dean of a Homœopathic College in Philadelphia, the regular colleges having refused to endorse the diploma, as their attention had been drawn to its character by the Lackawanna Society. Action upon this communication was postponed until the next day.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held May 7, 1885, A. JACOBI, M.D., President, in the chair.

THE PHYSICAL EXAMINATION OF WEAK CHESTS, AND THE DIFFERENTIAL DIAGNOSIS OF THE SEVERAL FORMS OF EARLY PHTHISIS.

Dr. E. DARWIN HUDSON read a paper with this title, in which he briefly referred to the theories regarding the nature of the existing chest-disease which gave rise to certain signs on physical examination, and mentioned the works of Avenbrugger, Laennec, Piorry, Skoda, Allison, Flint, Loomis, Clark, etc. There was reason to believe, he said, not only that pulmonary phthisis presented the three distinct types, catarrhal or bronchial, the fibroid or interstitial, and the tubercular or constitutional, but also that in very many cases it existed in a mixed form. The views which the author presented related to the methods of examination most useful in studying weak chests with tendencies to phthisis, in detecting the times of transition from danger to disease, and in differentiating the early forms of phthisis. They included no new theory as to the disease, but many years' observation in public and private practice.

In addition to the usually recognized essential physical signs of early phthisis, Dr. Hudson thought that many careful students of chest-acoustics had come to the recognition of the differentiation of the forms of fibroid consolidation, whether starting from the bronchi, or centric and diffuse, or distinctly of pleural origin. When over a definite area the percussion-note was pronouncedly flat or high-pitched, with relatively but a slight conduction of the normal sounds, unchanged in pitch and quality, the sounds being feeble and distant, the fibroid was likely to be peripheral, starting from the pleura. When the union of flatness on percussion and obscuration of respiratory and voice sounds was pronounced, especially if bilateral and attended with marked reduction of respiratory motion on both sides, the fibroid was likely to be more generally and diffusely interstitial. When the percussion-note was relatively but slightly raised in pitch, being rather deficient in duration and devoid of pulmonary quality, and there coexisted a general enfeeblement of respiration, the fibroid was likely to have started from the bronchi. The presence of exaggerated tubular quality of inspiratory sound, with slight increase of pitch, of retarded tubular expiration, would further determine whether the case was more especially one of peribronchitis, of bronchial thickening, or of bronchial rigidity and dilatation.

Dr. Hudson insisted upon the importance of examining all parts of the chest. Two areas, almost wholly passed over by most examiners, often afforded most valuable information: they were the high axillary region and the interscapular spaces. The importance of the interscapular space was dwelt upon at some length, and it was shown that while in ordinary positions the space was but small and thickly covered by muscles, yet by crossing the arms, placing the hands on the concavity of the scapulæ, the space was much widened and the intra-thoracic organs were brought in close proximity to the examiner.

The author was convinced that in a large proportion of cases of chest-disease a diagnosis could be made approximately by inspection alone.

In addition to the ordinary features observed during inspection, he indicated three points in particular. The first related to the direction of the clavicle. The upward angle

of the line of the clavicle was as a rule in healthy chests within the range of from ten to fifteen or twenty degrees. When the clavicle was deflected upward and backward at an angle of thirty to forty-five degrees, the chest-development had been manifestly most defective during a long term of years, and the presumption was that the lungs were undeveloped at their apices.

A second point referred to the relation which slight lateral curvatures of the spine bore to the condition of the respiratory organs. Where a certain combination of conditions which he mentioned existed it was reasonable to conclude that the intra-thoracic changes of one side diminished the respiratory action of the overlying muscles, and that an unequal traction on the spine by the antagonizing muscles of the two sides of the back had resulted in the curvature to the side of greater respiratory action and stronger muscles.

A pronounced depression above and below the clavicle, associated with narrow shoulders and marked deviation of the clavicle upward and backward, might exist over feebly-developed apices which were not diseased; but such a depression in a person possessing ordinary breadth of shoulders, and whose clavicles were but slightly deflected upward, was indicative of consolidation at the apex. The sinking in of the infra-clavicular space or of special intercostal spaces synchronous with inspiration, and notably in chests which retained their full expansion, pointed definitely to the existence of a peripheral fibroid of the lung. If the chest-expansion were diminished or suspended, inspiration became diaphragmatic, and here sinking in of the supra-sternal notch, the supra- and infra-clavicular spaces, and of the epigastrium synchronous with inspiration, pointed to a more diffuse and deeper fibroid, shooting from the periphery to the centre of the lung, drawing upon the chest-walls and bronchi.

Dr. Hudson believed that phthisis attacked the apices of the lungs more frequently than other parts for three reasons, namely: First, the apices were so frequently enfeebled by contraction of the upper part of the bony thorax. Second, the apex in this enfeebled condition was soonest reached and most easily invaded by frequent recurring catarrhal inflammations descending from the larynx and trachea. Third, the apices, when invaded by hyperæmia or catarrhal process, were not favorably affected by the energetic force of cough, which was essentially a diaphragmatic act.

Palpation of itself did not afford valuable diagnostic information as to the state of phthisical lungs; it was principally of value as related to fremitus.

Speaking of percussion, the author said that the impression prevailed that it was essentially the exponent of the underlying lung, but its exclusive pulmonary origin could easily be disproved. In contracted chests and in the mixed forms of early phthisis percussion would lead to no positive diagnosis until supplemented by auscultation.

Another physical sign to which the author called attention was the result of mediate percussion, and pertained to the subject of thoracic innervation and the influence of pulmonary tissue-waste upon the spinal centre. He referred to a special cutaneous reflex which characterized many, if not most, phthisical cases. It had first been described by Graves and Stokes in 1830, and called by Lawson Tait "myoidema." Dr. Hudson usually percussed with a quick, firm blow with three finger-tips of the right hand upon the costal cartilages of either side, and in phthisical cases instantly three little conoidal tumefactions appeared, rising to a variable height in different cases and remaining from a second to three seconds. Dr. Hudson was at present disposed to regard this as worthy to be added to the associated signs of pulmonary phthisis. It rarely occurred in any other than phthisical cases.

Speaking of auscultation, the author was not at all sure that the majority of examiners could dissociate vesicular murmur during active respiration on the one hand from the finer tubular friction-sounds, nor, on the other hand, from the susurrus of the thoracic muscles. He had for a long time come to regard the study of the conducted whisper as of equal or greater value than the study of changed vesicular murmur and conducted voice, and of far wider application in determining and differentiating the early stage of the three forms and the mixed cases of phthisis. The patient might utter a quiet, low-pitched whisper, which in quality and volume supplied the place of conducted tubular and vesicular sound, absent in contracted chests; or he might whisper clearly and audibly; or utter a short, abrupt, forcible, high-pitched, aspirated whisper, deficient in volume and duration, but of great intensity, a sound which preserved its characteristics unchanged by slight changes of tissue-density, and capable of transmission through bronchial thickening and fibroid areas when the feebler forms of whisper would be unconducted and unheard. At the apex, the low-pitched whisper changed by transmission through the pulmonary media to a high-pitched sound was diagnostic of incipient infiltration. The non-conduction of such a whisper, or the distant transmission of a high-pitched whisper, when associated with transmission of the voice unchanged in quality and pitch, pointed to peribronchial thickening or centric fibroid of limited extent. The non-conduction of both the low and high-pitched whisper, and a distant feeble conduction of the voice, pointed to a fibroid nearer the surface or progressing inward from a thickened pleura.

Dr. A. L. LOOMIS, being requested to open the discussion, said he had been very much interested in the paper just read, because the writer had sharply defined the physical signs of early phthisis; and, while he might not agree with all the statements made, in the main he endorsed the positions taken. The first point which had interested him concerned inspection. He thought that those who had examined chests for a long time had come more and more to realize the importance of carefully inspecting the chest before resorting to any other method of physical exploration. It often happened that the appearance of the chest almost compelled a diagnosis of early phthisis. But Dr. Loomis did not regard the slight deformities of the chest so often seen as in themselves of much significance, for out of fifteen hundred healthy chests he had found only ten per cent. entirely symmetrical.

The second point referred to the relative importance of an examination of the different areas of the chest. When he first began the study of physical exploration he received the impression that the infra-clavicular space was of greatest importance in determining the early stage of phthisis, but later on he came to attach more importance to the scapular space described by the author. In many cases it would be found that the disease had far advanced before it gave signs of its existence in the infra-clavicular space. The presence of signs of a peribronchitis in the scapular space was very significant, and for the first six months the signs of phthisis might be limited to this space. With regard to the axillary space, he could endorse what had been said concerning it by the author.

As to vocal fremitus, he had long since ceased to regard it as of great value, certainly of very little value in the early stage of phthisis. But he should lay more stress upon the importance of percussion than the author would seem to do. But it was important to perform percussion aright, and not in a "sledge-hammer" manner.

The whispered voice was to him of far greater importance than the spoken word. It told him more as to the exact condition of the pulmonary tissue, but it especially told him more as to the condition of the pleura. The changes which occurred in the pleura, giving but few physical signs, were often determined very accurately by the whisper.

As to vesicular respiration, it varied so greatly in different persons and in different methods of breathing that one needed to have listened to it very long before he could recognize those very slight changes which some experienced auscultators claimed were present. Dr. Loomis said he could not hear the vesicular murmur which was said to occur after the suspension of the inspiratory act, but he had often heard a muscular friction-sound. He had come to recognize as of importance in the early stage of phthisis three changes in the vesicular murmur,—namely, its softness, its harshness, and its interruption. When in middle life there was loss of the soft breezy character of the vesicular murmur and the presence of a harsh quality, especially if there was also a waviness of the inspiratory murmur, it signified changes in the bronchi and probable commencement of tuberculosis.

Dr. PAGE spoke of the value of myoidema as a sign of phthisis. He had found it present in nearly or quite all cases of phthisis, and most marked where the disease was advanced and emaciation was considerable. It occurred also most markedly on the side of the chest on which there was the greatest degree of emaciation. He considered it a result of muscular contractility.

Dr. JANEWAY had given sufficient attention to the sign myoidema to feel convinced that it was a very unreliable sign of phthisis, for the reason that it could be produced over various muscles of the body and was the result of muscular contractility. It was most apparent in emaciated subjects.

In addition to the signs of early phthisis already referred to this evening, Dr. Janeway spoke of the value of percussion at the beginning and end of full inspiration, particularly in the supra-clavicular region. He thought that if there was any sign of value in early phthisis it was the presence of râles in the small bronchi, limited to the supra-clavicular and supra-scapular regions. Subcrepitus in these regions, in cases of cough and loss of flesh, was a valuable sign. Dr. Janeway looked upon the presence of the tubercle-bacilli as an important aid in the diagnosis of the kind of phthisis.

Dr. HUDSON, in closing the discussion, expressed the opinion that myoidema was not due to muscular contraction, and said that the elevation of the skin in urticaria, for instance, was not caused by muscular contractility or reflex.

Dr. H. G. PIFFARD then demonstrated the value of the dentist's foot-bellows in connection with the hand-atomizer and the Paquelin cautery.

PHILADELPHIA ACADEMY OF SURGERY.

AT a meeting of the Philadelphia Academy of Surgery, held May 4, 1885, Dr. R. J. Levis, Vice-President, in the chair, a paper was read by Dr. D. Hayes Agnew, entitled

A CASE OF NEPHRORRHAPHY AND NEPHRECTOMY.

J. F. B., æt. 32, married, a native of Pennsylvania, was first admitted to the University Hospital October 31, 1882, with the following history. His occupation was that of a salesman. For some time he had been engaged

as such in a furniture establishment, and at the time enjoyed perfect health. In the fall of 1878, while assisting in lifting a heavy piece of furniture, he experienced a sharp pain deeply seated in the lumbar region and accompanied by the sensation of something having given way. The suffering was sufficiently severe to compel him to discontinue work. From that moment he dates his present illness. The most prominent symptom in his case was a dragging pain in right lumbar region, shooting down in the direction of the corresponding iliac fossa. This pain was paroxysmal and always aggravated by any unusual effort. Dimness of vision was also complained of. Nothing abnormal was discovered in the eye-ground.

On examination, a tumor was found on the right side of the abdomen, extending into the umbilical region, quite movable, and having the conformation of the kidney. This tumor, which could usually be readily felt, would sometimes disappear, requiring for its reappearance the manipulations of the patient himself. At the time of his admission into the hospital a notable quantity of albumen was present in the urine, which varied in amount from day to day. At no time were any casts discovered in this secretion.

The diagnosis was floating kidney, and after trying the various mechanical devices employed for similar conditions without success, the patient left the hospital. On October 3, 1884, he returned to the institution, at which time he came under my care. The pain was so severe and continuous that he had been compelled to use morphia almost daily, in considerable doses. He was entirely disabled for work, and even walking a very short distance was attended with distress. At this time the urine was examined a number of times, with negative results.

The treatment advised was nephrorrhaphy, and on October 10 the patient was placed upon the table, etherized, and the operation performed. A linear incision four inches long was made along the outer edge of and parallel with the course of the erector spinæ muscles. After dividing the different strata of tissues,—cutaneous, fascial, muscular, and aponeurotic,—the renal fat was reached and broken up, the kidney thrust back into its bed by pressure over the abdomen, and then secured in position by sutures of catgut passed through the capsule of the organ and the edges of the wound. The peritoneal fat was also stitched to the sides of the incision in the soft parts. A drainage-tube was next introduced and the sides of the wound slightly approximated by two sutures, one near to the upper and the other to the lower angle, after which the parts were dressed with the aseptic gauze, MacIntosh salicylated cotton, and binder. The entire operation was conducted under strict antiseptic precautions.

After the first twenty-four hours his temperature became normal, and during the entire period of his convalescence nothing unusual occurred. He was discharged November 15, 1884, and returned home. For something over a month he remained well, but on making some exertion was again seized with the old pain, followed by the same disability.

April 21, 1885, the patient re-entered the hospital, and on the 23d of the same month I removed the kidney by the lumbar incision. The operation consisted in making two incisions: the first one inch below and parallel with the last rib, and five inches in length; the second parallel with the external border of the erector spinæ muscles, and extending from the first incision almost to the crest of the ilium. On reaching the renal adipose tissue the latter was again torn, the kidney drawn into the wound and enucleated from its surrounding connection by the fingers and forceps. The ureter was next exposed and tied with two ligatures. A double ligature was next passed around the renal vessels and tied, after which both ureter and vessels were divided between the threads and the organ removed. The threads used for the ureter and renal vessels were silk which had been previously rendered aseptic by boiling in carbolized water. Only two or three vessels belonging to the external parts required to be tied, the ligatures being catgut. A large drainage-tube was next carried to the bottom of the wound, and the latter closed by silver sutures. The operation, dressing, and after-treatment were all made under strict aseptic precautions.

The patient made a rapid recovery without a single untoward symptom, and was discharged May 21, 1885, four weeks from the date of operation. The urine, which for the first two or three days amounted to twenty-four ounces, gradually rose in quantity until at the expiration of ten days forty ounces were passed.

DISCUSSION.

Dr. Levis asked what was the material of the ligatures.

Dr. Agnew replied that they were silk ligatures boiled in carbolated water and kept in carbolized oil. The ureter and vessels were ligatured separately. The chief difficulty is experienced in enucleating the kidney; the walls of the vessels are very thin.

"I can readily see how the operation might be done in one-half the time by passing a strong ligature around the kidney before commencing to enucleate, and pushing this before the fingers as the attachments of the organ are broken up. Then, if any accident happens, the ligature could be slipped below the bleeding point and quickly tightened."

Dr. S. W. Gross said, "I take it, Mr. President, that under no circumstances should any operation be resorted to for a wandering kidney until after the failure of mechanical appliances to fix the organ in position. Even

in the event of failure, which is highly probable, surgical interference is not justifiable unless the patient is unable to bear up against suffering, since we have to deal with a kidney the structure of which is normal, and which, therefore, is performing its functions.

"Stitching the capsule of the kidney to the margins of a lumbar wound should always be practised before resorting to the harsher remedy, nephrectomy. Of 17 nephrorraphies which I have collated, 1, or 5.88 per cent., died; the operation utterly failed to fix the kidney in 4 of the survivors; and the success was only partial in 3. Hence, although it has not afforded relief in one-half the cases, its comparative freedom from danger makes it preferable to nephrectomy.

"Extirpation of a painful floating kidney has been done 22 times, with 13 recoveries and 9 deaths, or a mortality of 40.90 per cent. Of 19 abdominal operations, 11 were cured, and 8, or 42.10 per cent., perished; while of 3 lumbar operations 2 recovered, and 1, or 33.33 per cent., died. As the kidney can be made to protrude through an incision in the loin in the majority of instances, the lumbar operation is the preferable one; although if there should happen to be a long mesonephron the ventral operation would be easier and attended with comparatively little risk. The dangers of the latter operation, indeed, are only marked when the kidney moves beneath the peritoneum. In estimating the risks it must, however, be borne in mind that peritonitis was the cause of one-half of the deaths, so that by selecting the lumbar incision that danger is almost entirely avoided.

"I say that it is almost entirely avoided, because the lumbar incision does not entirely protect against the danger of peritonitis. I have examined the records of a large number of nephrectomies, and I find that the pleura has been opened in one, and that in six cases the peritoneum has been opened. Once the colon was torn, and there was fæcal effusion into the peritoneal cavity.

"As regards the incision, I think from my knowledge of the subject that I may say, with Prof. Agnew, that the ordinary linear incision, such as made in performing nephrotomy, is not the incision to be advised for extraction. Many operators make an oblique incision from the border of the erector spinæ muscles, commencing on a line with the lower border of the twelfth rib, and carry the incision obliquely forward to the crest of the ilium. Other operators have employed the same incision as Dr. Agnew has described."

Dr. Agnew remarked, "It is proper to say, in this connection, that all the ordinary appliances had been employed with the view of fixing the kidney, but they had all failed; also that the operation was done under strict aseptic precautions. After the first operation the divided aponeurosis never filled up with connective tissue, and I think it doubtful if it ever does. This probably leaves the patient liable to hernia of the colon."

Dr. Levis: "I would ask Dr. Gross what other inconveniences are connected with floating kidney beside the pain. Are there any dangers to life?"

Dr. Gross: "There are no dangers to life from floating kidney. The only trouble is the intense suffering, which interferes with the patient's occupation. The history of Dr. Agnew's case is as good a one as could be had of floating kidney.

"In regard to mechanical appliances, it has been found that they are really of little value. All sorts of compresses and pads have been employed, but there are few cases in which they have been of the slightest value. It was on this account that Hann introduced nephrorrhaphy."

Dr. Levis: "About ten days ago, at the Jefferson College Hospital, I reached the kidney in an unintentional manner. A child was brought to the hospital who for a long time had presented symptoms which appeared to me and to other surgeons to indicate perinephritic abscess. The child was ten years old, and the thigh drawn up on the pelvis. Exacerbations of fever occurred every day, the temperature at intervals going up to 102°. Percussion seemed to outline a cavity filled with fluid, and there appeared to be fluctuation.

"I made the oblique incision described by Dr. Gross. The farther I cut down, however, the less distinct appeared to be the sense of fluctuation. At last I reached a large kidney which I believed to be sarcomatous. I could hardly resist the temptation to remove it. I was deterred from operating partly because of the fact that I had not obtained the consent of the child's parents and partly on account of the remarks made by Dr. Gross at Washington in regard to nephrectomy in children.

"Since the operation the child has had no pain, and the thigh can now be straightened, and I believe that I have done a nerve-stretching all around the kidney. As I say, there have been no pain and no exacerbations of fever since the operation."

Dr. Gross: "I think that it is quite possible that in this particular case the benefit was due to the relief of tension from the division of the tissues overlying the kidney. There are cases on record by Anandale, Lucas, and Morris, in which the operator cut down on the kidney with the expectation of finding a calculus, but after manipulating the kidney no stone was found. In all these cases there had been a great deal of pain before the operation, but in many of them there was absolute relief either from removal of tension or from something done to the nerves, possibly nerve-stretching, as has been suggested. Weeks, in a paper published about 1883, says that a mere incision

of the loins over the kidney will probably suffice to fix the kidney by the granulations which spring up. I think, however, that this is merely an idea, for if after stitching the kidney to the external tissues the organ will slip back in one-half the cases, we should not expect a simple incision to fix it.

"In certain operations on the abdominal cavity, as in cyst of the pancreas, cholecystotomy, and abscess of the liver, some operators have made an incision down to the peritoneum and introduced into the wound some foreign material, as antiseptic lint, so as to create adhesions between the wall of the cyst and the wall of the abdomen, and thus prevent effusion into the cavity of the peritoneum when the cyst was opened. Although the operation for floating kidney is somewhat different from this, yet I believe that if, after the lumbar incision had been made and the kidney sutured to the edges of the incision, it were possible by adapting some apparatus in front to make gentle compression on the kidney and keep it in the wound, and to lay in the bottom of the wound a foreign material to excite more rapid inflammation, we thus might fix the kidney. This seems feasible."

Dr. J. William White observed that in this case in the first operation the wound was left open to favor granulation, and a large pad was placed in front to carry the kidney backward.

Dr. Levis asked Dr. Agnew if it would add to the risks of the operation to transfix the tissue of the kidney itself in order to obtain a firmer hold.

Dr. Agnew said, "It is not possible to say what might be the effect; but where stones have been taken out of the kidney there seems to have been no difficulty in scratching through the kidney-structure sufficiently to remove the stone. I think that if I should do nephrorrhaphy again I should break up all the connections of the kidney and turn it into the wound, and stitch the fatty and connective tissues to the margin of the wound. I think that this would not endanger life more than the ordinary operation."

Dr. White stated that at the operation Dr. Agnew had on the table an ovariotomist's clamp. The idea of encircling the pedicle with a ligature did not occur to him until after the operation. The delay in the operation was from the danger of tearing through the vessels, especially the renal vein, which would be a serious complication.

The operation is really a very simple one. The difficulty in this case—and the same was found in performing the operation on the cadaver—was in finding the ureter and in isolating and ligating the vessels. There is no trouble in finding the kidney, and there seemed to be little difficulty in avoiding the colon.

Dr. Levis inquired, "What about the propriety of ligaturing the pedicle *en masse*?"

Dr. White: "It seems to me that it might increase the danger of secondary hemorrhage from separation of the ligature too quickly. There would probably be other objections in connection with ligature of the ureter."

Dr. Levis: "In the case to which I have referred, while contemplating the propriety of extirpation, it occurred to me to take the serrated bone-forceps and grasp the pedicle, and make it secure, and thus guard against the risk of hemorrhage. I cannot see any objection to tying the pedicle *en masse*."

Dr. Gross: "It has been done repeatedly. I may say that, apart from the removal of tumors, there has been no hemorrhage. There is only one case on record, a case of pyonephrosis, in which the patient perished from primary hemorrhage. In other cases hemorrhage has occurred in the removal of sarcomatous and carcinomatous tumors. In one case the vena cava was opened, but the bleeding was controlled by pressure. In another case (Cheyne) the abdominal aorta was torn. It was tied; but the patient of course died."

Dr. J. Ewing Mears: "In the cases of nephrorrhaphy which have been reported as successes, has Dr. Gross any information as to the time after operation at which the cases were reported?"

Dr. Gross: "They have been reported long enough after operation to show the result."

Dr. Mears: "The history of these cases seems to indicate that this operation is almost useless, and that nephrectomy is the operation which should be performed. There is great difficulty in obtaining a secure hold on the kidney and retaining it in position until adhesions have formed. Then these adhesions may not be strong enough to resist the power exerted by the muscles. Considering these things, I believe the proper operation would be to remove the kidney at once. The operation for fastening the kidney in position is probably not so grave, although, so far as the separation of tissue is concerned, it is nearly if not quite as extensive. It would require some time to decide whether or not the adhesions which had formed after the operation were sufficient to hold the kidney in position."

SUBSTITUTE FOR TRACHEOTOMY TUBE.

Dr. Packard presented for examination a device as a substitute for the tube after tracheotomy. He also exhibited a safety-pin removed by tracheotomy from the larynx of a child five years of age, illustrating a difficulty in diagnosis.

He also presented a specimen of a foreign body removed from the bladder, with the following history. A girl was brought to St. Joseph's Hospital with the history of having passed calculous formations from the urethra. This was the only history that he could ob-

tain. It was clear from a simple exploration with a short sound that the foreign body could not be removed without dilatation of the urethra. This was done, and with the forceps he removed this hair-pin bent in this peculiar shape. A number of calculous formations came after it. The girl recovered, and left the hospital without explaining how she had managed to get the hair-pin in that shape into the bladder.

REVIEWS AND BOOK NOTICES.

HARVEIAN LECTURES ON THE MODE OF DEATH FROM ACUTE INTESTINAL STRANGULATION AND FROM CHRONIC INTESTINAL OBSTRUCTION. Delivered before the Harveian Society of London. By THOMAS BRYANT, F.R.C.S.

This valuable monograph by the senior surgeon of Guy's Hospital is based on a study of fifty-nine cases, the clinical records of which are given in full.

From his great experience, his acknowledged position, and the careful study he has evidently given the subject, his conclusions are worthy of the utmost consideration.

He objects to cases of strangulation being placed among those of obstruction, as the obstruction in cases of strangulation is only one of the symptoms and not the cause of danger nor of death. The danger is from changes in the bowel itself.

After describing the pathology and symptoms of internal strangulation, he says,—

"What bearing, then, should these facts have upon surgical practice? Are they such as to lead the practitioner to depend upon a surgery of hope, based upon the administration of drugs which mask symptoms, but do nothing towards the relief of the mechanical conditions upon which the symptoms depend? Or should they lead him to look boldly at each case as it presents itself, and to act decidedly and with precision? In a case of strangulated hernia, the rule is now well recognized that on the appearance of vomiting—from the first occurrence of which symptom the date of strangulation is calculated—no time should be lost in the reduction of the hernia, either by taxis or herniotomy; for surgeons and pathologists well know that nothing less than the mechanical relief of the mechanical condition which is called strangulation in a hernia can be of essential service, and that, until this end be secured, opium only masks symptoms and brings about a fool's paradise, where the surgery of hope may exercise itself at the expense of scientific knowledge and patients' lives.

"In a case of internal hernia, or of internal strangulation, from whatever cause,—conditions ushered in by the same series of symptoms as indicate an external hernia, though without an external swelling,—surely the same sound principles of surgery are equally applicable; and it behooves the surgeon, in the one case as in the other, to relieve the mechanical condition which is called strangulation by the only means by which relief can be afforded, and that is by operation."

After giving a large number of cases, with their histories in full, he concludes with the following rules of practice:

1. Laparotomy should be undertaken as soon as the diagnosis of acute intestinal strangulation is made. There should be no delay allowed for the formation of a specific diagnosis of its cause. It should likewise be proposed in all cases of acute intussusception, and even of chronic, which have failed within three or, at the most, four days, to be relieved by other treatment.

2. In all operations of laparotomy it is to the cæcum that the surgeon should first advance, since it is from it he will obtain his best guide. If this be distended, he will at once know that the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. Adhesions or bands are, moreover, more frequently near to or associated with the cæcum than with any other part of the intestinal tract. It is also in the right iliac fossa that the collapsed small intestine is found; and with this as a starting-point, the surgeon will have less difficulty in tracing up the intestine to the seat of strangulation than if he begins at a distended coil, when it will be a matter of chance whether he travels away from or towards the special object of his search, the seat of obstruction.

3. In a laparotomy, when the strangulated coil of bowel is gangrenous it should be brought out of the wound and the gangrenous knuckle resected. The proximal and distal ends of the resected bowel should then be stitched to the edges of the wound and an artificial anus established.

4. Nélaton's operation of enterotomy should be undertaken when laparotomy is rejected.

In the lecture on the differential diagnosis he states, "A sudden attack of abdominal pain, accompanied with vomiting, attacking a patient previously in good health, the two symptoms being more or less paroxysmal and associated with obstruction, mark its nature; and they do, whether or not they are complicated with an external hernial swelling. When the latter condition obtains, a strangulated hernia is readily diagnosed; when no such swelling is present to make the special diagnosis sure, the symptoms are still enough to indicate the existence of some internal strangulation, although its special form may be obscure." J. M. B.

"SNIDE PLATINUM" was named as the cause of death by a coroner's jury in this city in the case of a child who died after drinking hair-dye presumably containing cyanide of potassium.

MISCELLANY.

POWERS OF A BOARD OF HEALTH.—An important decision to sanitary authorities has recently been given in New Jersey by the State Court of Errors and Appeals. The case was that of the American Hotel at Trenton, which claimed the right to construct a private sewer discharging into a small stream running through the city, after being refused permission by the Board of Health. The hotel claimed that the authority to construct the sewer was confirmed by the Councils of the city, and furthermore contended that the Board had no right to interfere, because the law under which it was organized was unconstitutional.

The decision was against the hotel company, on the following points: 1. The City Councils had no power to license an individual to lay a private sewer in public streets, or to discharge filth into an open water-course not a public sewer. 2. The action of the Board of Health in proceeding in equity for an injunction was not in excess of its powers. The court took the broad ground that "no business is so necessary as to justify those conducting it in creating a nuisance in the thickly-settled parts of a city. If a hotel cannot dispose of its necessarily accumulating filth without creating a nuisance, and happens to be erected in a populous city which will not or cannot provide sewers or other facilities for disposing of such filth without injury, it is plain that its business must cease in that locality until it can be conducted with due regard to public safety and comfort."—*Sanitary Engineer.*

PREPARED MALT AS FOOD FOR INFANTS AND INVALIDS.—An analysis by Mr. G. W. Wigner, the President of the Society of Public Analysts of England, throws considerable light not only on the composition, but also on the physiological action of the preparation known as Mellin's Food. It appears that it contains nearly eighty-seven per cent. of dextrine, maltose, etc., soluble in cold water.

"As Mr. Wigner points out, it is not a mere starch or sugar food, but a soluble preparation containing those nitrogenous and phosphatic materials which contribute largely to the growth of bone and tissue in young children. Being thoroughly malted, it is not only readily digestible itself, but actually assists in the digestion of milk and other foods with which it is mixed. It must of necessity be of great value in the case of feeble infants who cannot digest ordinary starchy foods. Mr. Wigner's analysis has evidently been performed with great care, and is of much interest."—*British Medical Journal*, May 3, 1885.

PUERPERAL PEPTONURIA.—During the postpartum period of uterine involution, and before fatty degeneration of the uterus occurs, Fischel finds peptone in the urine, which is found also in the lochia; but the former does not proceed from the latter. From experiments in a number of cases he concludes that the peptonuria was derived from the muscular substance of the uterus, and that its presence during life is securely established. It is not to be found during rest in the unimpregnated uterus, nor long after the uterus has evacuated its contents; it does not occur after the full establishment of fatty degeneration. Analyses of the urine of pregnant women were also made, but without a definite result.—*Manchester Med. Chronicle.*

DR. B. F. BAER, President of the Philadelphia Obstetrical Society, and late Demonstrator of Diseases of Women in the University of Pennsylvania, has been elected Professor of Diseases of Women and Children in the Philadelphia Polyclinic and College for Graduates in Medicine.

DR. H. AUGUSTUS WILSON, having returned from his studies abroad, has been elected Professor of Fractures and Dislocations in the Philadelphia Polyclinic and College for Graduates in Medicine, and Secretary of the Faculty.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 24, 1885, TO JUNE 6, 1885.

MAJOR ALBERT HARTSUFF, SURGEON.—Ordered from Department of Missouri to Department of the East.

MAJOR H. E. BROWN, SURGEON.—Ordered from Department of the East to Department of Missouri. S. O. 121, A. G. O., May 27, 1885.

MAJOR S. M. HORTON, SURGEON.—Ordered for duty as post-surgeon, Fort Riley, Kansas.

MAJOR P. J. A. CLEARY, SURGEON.—Ordered for duty as post-surgeon, Fort Lyon, Colorado. S. O. 78, Department of Missouri, June 1, 1885.

MAJOR J. M. BROWN, SURGEON.—Assigned to duty as post-surgeon at Fort Omaha, Nebraska.

CAPTAIN LOUIS BRECHEMIN, ASSISTANT-SURGEON.—Relieved from duty at Fort Omaha, Nebraska, and assigned to duty as post-surgeon at Fort D. A. Russell, Wyoming. S. O. 49, Department of the Platte, May 29, 1885.

CAPTAIN CALVIN DE WITT, ASSISTANT-SURGEON.—Ordered for duty at Newport Barracks, Kentucky. S. O. 107, Department of the East, May 22, 1885.

CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON (Department of Texas).—Ordered for temporary duty in Department of Missouri. S. O. 58, Department of Texas, May 25, 1885.

CAPTAIN WILLIAM R. HALL, ASSISTANT-SURGEON (David's Island, New York Harbor).—Ordered for temporary duty at Willett's Point, New York, during absence of post-surgeon. S. O. 121, A. G. O., May 27, 1885.

CAPTAIN JOS. Y. PORTER, ASSISTANT-SURGEON.—Granted leave of absence for six months, on account of disability. S. O. 126, A. G. O., June 3, 1885.

CAPTAIN WILLIAM G. SPENCER, ASSISTANT-SURGEON.—Ordered for duty at Fort Sisseton, Dakota Territory. S. O. 55, Department of Dakota, May 20, 1885.

CAPTAIN WM. B. DAVIS, ASSISTANT-SURGEON.—Granted leave of absence for one month from May 25, 1885. S. O. 122, A. G. O., May 28, 1885.

FIRST-LIEUTENANT R. L. ROBERTSON, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 123, A. G. O., May 29, 1885.